BID NO. PUR-1189

CONTRACT FORMS, BID FORMS AND SPECIFICATIONS

ONE (1) NEW AIRCRAFT RESCUE AND FIRE FIGHTING (ARFF) TRUCK PROCUREMENT

AIP 3-24-0019-048

PREPARED FOR THE

HAGERSTOWN REGIONAL AIRPORT –
RICHARD A. HENSON FIELD

HAGERSTOWN, MARYLAND

PREPARED BY

AIRPORT DESIGN CONSULTANTS, INC (ADCI)
6031 UNIVERSITY BOULEVARD, SUITE 330
ELLICOTT CITY, MARYLAND
(410) 465-9600

BID DOCUMENTS

FEBRUARY 2013

TABLE OF CONTENTS

Table of Contents **Page**

Table of Contents i

Section I: Contract Forms

Introduction CF-1
Invitation to Bid CF-2-3
Instructions to Bidders CF-4-8
Policy Number P-4: Insurance Requirements for Independent Contractors ..... Follows CF-9-10

Project Bid Forms CF-11

Form of Proposal CF-12-13
Bid Bond CF-14-15
Payment Bond CF-16-18
Performance Bond CF-19-21
Bidder's Affidavit CF-22-23
Form of Non-Collusion Affidavit CF-24
Certification of Non-Segregated Facilities CF-25

Section II: Federal Requirements For AIP Project Contracts

Buy American Preference – Title 49 USC, Chapter 501 ..... F-1-2
Civil Rights Act of 1964, Title VI – Contractor Contractual Requirements F-3-4
Airport and Airway Improvement Act of 1982, Section 520 – General Civil Rights Provisions - Title 49 USC 47123 ..... F-5
Lobbying and Influencing Federal Employees – 49 CFR Part 20 ..... F-6
Access to Records and Reports – 49 CFR Part 18.36 ..... F-7
Disadvantaged Business Enterprises – 49 CFR Part 26 ..... F-8
Energy Conservation Requirements – 49 CFR Part 18.36 ..... F-9
Breach of Contract Terms – 49 CFR Part 18.36 ..... F-10
Rights to Inventions – 49 CFR Part 18.36 ..... F-11
Trade Restriction Clause – 49 CFR Part 30.13 ..... F-12-13
Termination of Contract – 49 CFR Part 18.36 ..... F-14
Certification Regarding Debarement, Suspension, Ineligibility And Voluntary Exclusion – 49 CFR Part 29 ..... F-15
Clean Air and Water Pollution Control – 49 CFR Part 18.36(i)(12) F-16

Section III: **Technical Specifications**

ARFF Airport Rescue and Fire Fighting (ARFF) Vehicle TS-1-41

End of Table of Contents

INTRODUCTION

GENERAL PROJECT SUMMARY

1. GENERAL

1.01 Project Identification: This project shall be known as "ARFF Truck Procurement" The Federal Aviation Administration (FAA) is contributing to the project through the Airport Improvement Program. The FAA identification for the design of this project is AIP-3-24-0019-048.

1.02 Bid Documents: Bid documents are available immediately from the Washington County Website: **www.washco-md.net** by accessing the "Purchasing & Engineering Bid Listing" or may be obtained from:

Washington County Purchasing Department
Washington County Administration Building
100 West Washington Street, Room 320
Hagerstown, Maryland 21740-4748

2. GENERAL DESCRIPTION OF WORK

2.01 General. Procurement under this contract shall be done in accordance with the specifications and references contained within the Contract Documents. Provider shall furnish the specified ARFF vehicle, complete, as detailed in the Contract Documents.

3. SPECIAL ATTENTION – PRE-BID CONFERENCE

Prior to the submission of bids, a pre-bid conference shall be held as described in the Invitation to Bid. At that time, the Contractor will have the opportunity to ask questions regarding the contemplated ARFF vehicle. Any questions raised after this conference shall be submitted, in writing, to the Washington County Purchasing Director as outlined in the Instructions to Bidders. It is in the best interest of the Contractor to be thoroughly familiar himself/herself with the bid document prior to the pre-bid conference.

BID NO. PUR – 1189

INVITATION TO BID
ONE (1) NEW AIRCRAFT RESCUE AND FIRE FIGHTING (ARFF) TRUCK PROCUREMENT
HAGERSTOWN REGIONAL AIRPORT - RICHARD A. HENSON FIELD
AIP 3-24-0019-048

The Board of County Commissioners of Washington County, Hagerstown, Maryland (hereinafter the "Owner") will receive sealed bids for the project titled **"ARFF Truck Procurement"** at the Hagerstown Regional Airport - Richard A. Henson Field, Washington County, Maryland. Bids must be received and time stamped at the Washington County Purchasing Department, Washington County Administration Building, 100 West Washington Street, Room 320, Third Floor, Hagerstown, Maryland, 21740-4748, no later than **2:00 P.M., local time on Monday, March 4, 2013** at which time they will be publicly **opened and read aloud in Conference Room 325**. Bids received after this time will be returned unopened.

NOTE: All Bidders must enter the County Administration Building through the front door, 100 West Washington Street entrance, and must use the elevator to get to the Purchasing Department to submit their bid. Alternate routes are now controlled by a door access system.

Bid documents are available immediately from the Washington County Website: **www.washco-md.net** by accessing the "Purchasing & Engineering Bid Listing" or may be obtained from:

Washington County Purchasing Department
Washington County Administration Building
100 West Washington Street, Room 320
Hagerstown, Maryland 21740-4748

Bidders shall make a good faith effort to obtain Disadvantaged Business Enterprise (DBE) participation of one (1%) percent of the dollar value of the Contract in accordance with the Federal Aviation Administration (FAA) DBE Program, 49 CFR 26, and the goals established by the Airport.

Bid Security in the form of a Cashier's Check, Certified Check, or Bid Bond payable to the Board of County Commissioners, Washington County, in an amount equal to Five percent (5%) of the Bid Price shall be submitted by each Bidder. The successful bidder is required to furnish satisfactory Payment and Performance Bonds for the full amount of the Contract. Bids shall be properly and completely executed on bid forms (FORM OF PROPOSAL) provided with the bid documents in accordance with the "Instructions to Bidders" and be submitted on forms supplied the County. All work shall conform to the specifications. The Bidder must use the Schedule of Prices forms from the Bid Documents to submit his/her bid.

A Pre-Bid Conference will be held on **Monday, February 18, 2013 at 10:00 A.M.** in the Airport Conference Room located at 18434 Showalter Road, Hagerstown, Maryland. Attendance at this Conference will not be mandatory for those wishing to submit bids, but it is strongly encouraged.

The Owner may make such investigations as deemed necessary to determine the ability of the bidder to provide the vehicle as specified, and prospective bidders shall be required to furnish to the Owner's representative evidence of performance of similar procurements of this magnitude and complication and all such information and data for this purpose as may be requested. The Owner reserves the right to reject any bid if the evidence submitted by, or investigation of, such bidder fails to satisfy the Owner that such bidder is properly qualified to carry out the obligation of the Contract and to deliver the vehicle contemplated therein.

The Owner reserves the right to reject any and/or all bids and to waive any informalities or irregularities in the bidding and to take whatever action is to the best interest of the County.

Washington County makes positive efforts to utilize Disadvantaged Business Enterprises for its supplies and services and allows these sources the maximum feasible opportunity to compete for contracts. The Board of County Commissioners does not discriminate on the basis of race, color, national origin, sex, religion, age, and disability in employment or the provision of services. Individuals requiring special accommodations are requested to contact the undersigned at 240-313-2330 Voice, TTY Dial 711 to make arrangements no later than seven (7) calendar days prior to the Pre-Bid Conference and/or Bid Opening.

Funding for the procurement of this vehicle through the Federal Aviation Administration (FAA) Airport Improvement Program (AIP) is anticipated.

BY THE AUTHORITY OF:

Karen R. Luther, CPPO
Purchasing Director

BOARD OF COUNTY COMMISSIONERS
OF WASHINGTON COUNTY, MARYLAND

ONE (1) NEW AIRCRAFT RESCUE AND FIRE FIGHTING (ARFF) TRUCK PROCUREMENT
HAGERSTOWN REGIONAL AIRPORT - RICHARD A. HENSON FIELD
WASHINGTON COUNTY, MARYLAND

INSTRUCTIONS TO BIDDERS

To be considered, Proposals must be made in accordance with these Instructions to Bidders.

1. **SEALED PROPOSALS**: Sealed proposals must be received and time-stamped at the Washington County Purchasing Department at the County Administration Building, 100 West Washington Street, Room 320, Hagerstown, Maryland 21740-4748, **no later than 2:00 P.M., local time on Monday, March 4, 2013 at which time they will be publicly opened and read aloud in the Third Floor Conference Room 325**. Bids received after this time will be returned unopened. The sealed proposals will be in accordance with the specifications prepared for this project by Washington County's Consultant, Airport Design Consultants, Inc (ADCI) of Columbia, Maryland.

2. **PRESENTATION OF BIDS**: These specifications include a set of Proposal Forms that the Contractor shall fill out. Each proposal shall be submitted on the forms as set forth in these specifications, accompanied by a CERTIFIED CHECK, CASHIER'S CHECK or BID BOND made payable to the Board of County Commissioners of Washington County. These documents shall be placed in an opaque envelope sealed and endorsed with the project name, AIP No., bidder's company name and address, name and address of the Owner receiving the proposal, and bidder's Maryland registration number. The outside of the envelope shall indicate: "**BID PROPOSAL – ARFF TRUCK PROCUREMENT"** The enclosed documents shall be complete in their entirety. (All blank spaces on the documents must be completed, in ink or typewritten.) The completed documents shall be without interlineation, alteration, or erasures. The signature of the bidder shall be longhand. No responsibility shall be attached to any person or persons for premature opening of bids not properly endorsed or sealed. Each bidder shall be entirely responsible for having the proposal in the hands of the Owner at the time and place as specified above. Otherwise, the bid will not be accepted and the Owner shall in no way be responsible for its loss or destruction. Ample time should be allowed for the transmittal of bids by mail, and postmarks indicating the date of mailing will not be considered as evidence of intent to submit bids in proper time for the opening. The Board of County Commissioners of Washington County, Maryland, reserves the right to accept or reject any or all bids, to waive formalities, informalities and technicalities therein. The Board reserves the right to contact a Bidder for clarifications and may, at its sole discretion, allow a Bidder to correct any and all formalities, informalities and technicalities in the best interest of Washington County.

3. **DOCUMENTS**: Bid documents are available immediately from the Washington County Website: www.washco-md.bet by accessing the "Purchasing & Engineering Department Bid Listing" or may be obtained from:

Washington County Purchasing Department
Washington County Administration Building
100 West Washington Street, Room 320
Hagerstown, Maryland 21740-4748

4. **WITHDRAWAL OF BIDS**: A bid may be withdrawn by written or telegraphic request subsequently confirmed in writing provided that such request is received prior to the time of opening bids as stated above. However, the Owner will not be held responsible for the timely receipt of any request for ample time for delivery before the bid opening. No bid received can be withdrawn by any bidder for a period of one hundred twenty (120) calendar days after this opening, as no claim for release on account of mistake or omission in the bidding will be considered. Each bidder will be held strictly responsible to his/her bid.

5. **INTERPRETATION, DISCREPANCIES, OMISSIONS**: Should any bidder find discrepancies in, or omissions from, the bid documents, or should be in doubt of their meaning, the bidder should at once request in writing an interpretation from:

Karen R. Luther, CPPO, Purchasing Director
Washington County Purchasing Department
Washington County Administration Building
100 West Washington Street, Room 320
Hagerstown, Maryland 21740-4748
FAX: 240-313-2331

All necessary interpretations will be issued to all bidders in the form of addenda to the specifications, and such addenda shall become part of the contract documents. Requests received after **4:00 P.M., local time on Monday, February 25, 2013** may not be considered. Every interpretation made by the County will be made in the form of an addendum which, if issued, will be sent by the Purchasing Director to all interested parties.

6. **BID SECURITY**: Bid Security in the form of a Cashier's Check, Certified Check, or Bid Bond payable to the Board of County Commissioners, Washington County, in an amount equal to five percent (5%) of the Bid Price shall be submitted by each Bidder. The Cashier's Check or Certified Check must be drawn on a solvent bank authorized to do business in the State of Maryland. The surety company issuing the Bid Bond must be authorized to do business in the State of Maryland. The successful bidder's security will be retained until he/she has signed the Contract and furnished the required payment and performance bonds. The

Owner reserves the right to retain the security of the two lowest bidders until the low bidder enters in to a Contract or until one hundred twenty (120) calendar days from the bid opening, whichever is sooner. The Owner will retain this Bid Security as liquidated damages, but not as a penalty, should the low bidder fail to enter into a contract or provide bonds as stipulated. Should the low bidder enter into a contract as stipulated, the bid security of the second bidder shall be returned forthwith, otherwise upon failure of the low bidder to enter into a contract, action may begin with the second bidder under the same provisions as for the low bidder, or all bids will be rejected.

7. **SECURITY FOR FAITHFUL PERFORMANCE**: Simultaneously with his/her delivery of the executed contract, the Bidder shall furnish a Surety Bond or Bonds as security for faithful performance of this Contract and furnishing equipment in connection with this Contract, as specified in the General Conditions included herein. The surety on such bond or bonds shall be a duly authorized surety company satisfactory to the Owner.

8. **POWER OF ATTORNEY**: Attorney's-in-fact who sign Bid Bonds or Contract Bonds must file with each bond a certified and effectively dated copy of their power of attorney.

9. **LAWS AND REGULATIONS**: The bidder's attention is directed to the fact that all applicable State laws, municipal ordinances, and the rules and regulations of all authorities having jurisdiction over construction of the project shall apply to the Contract throughout, and they will be deemed to be included in the Contract the same as though herein written out in full.

10. **QUALIFICATIONS**: The Owner may make such investigations as deemed necessary to determine the ability of the bidder to perform the work, and the bidders shall furnish to the Owner all such information and data for this purpose as the Owner may request. The Owner reserves the right to reject any bid if the evidence submitted by or investigation of, such bidder fails to satisfy the Owner that such bidder is properly qualified to carry out the obligation of the Contract and to complete the work contemplated therein. Conditional bids will not be accepted.

11. **SUBSTITUTIONS**: All equipment is to be supplied in exact accordance with the specifications. Any bidder who contemplates offering a vehicle that differs from that specified must obtain the Owner's written approval prior to bid opening. Substitution requests must be received in the Purchasing Department no later than **4:00 P.M., Monday, February 25, 2013.** Requests received after the specified date/time may not be considered. All such decisions will be considered final and not subject to further recourse.

12. **PRE-BID CONFERENCE**: As described in the Invitation to Bid, a Pre-Bid Conference will be held on **Monday, February 18, 2013 at 10:00 A.M.** in the Airport Conference Room located at 18434 Showalter Road, Hagerstown, Maryland with all interested parties. This will be an informal question and answer type meeting. Attendance at this conference will not be mandatory but it is strongly encouraged for those Contractors wishing to submit bids.

13. **OPENING**: Proposals will be opened as announced in the Invitation to Bid.

14. **TIME OF COMPLETION**: By submission of proposal, the Bidder agrees to commence work under this contract upon receipt of the Notice to Proceed, prosecute the work diligently and substantially complete the project within two hundred seventy (270) consecutive calendar days.

15. **LIQUIDATED DAMAGES**:

A. Overall Duration: Should the Contractor fail to complete the work within the allotted two hundred seventy (270) consecutive calendar days, the Owner will assess liquidated damages in the amount of five hundred ($500.00) for incidental costs incurred by the Owner for each consecutive calendar day of the delay.

16. **WARRANTY**:

A. In submitting a proposal, each Bidder thereby represents that upon award of the Contract, he/she will provide written guarantee of all equipment for the period of one (1) year from date of final acceptance of the delivered equipment. During the guarantee period, the Bidder will be required, within a reasonable length of time after receipt of written notice by the Owner, to make good any defects in the equipment which may have developed.

B. For those items for which manufacturers provide a warranty, the warranty shall be transferred to the Owner after accepted delivery along with all necessary paper work to make the warranty valid for the manufacturer's warranty period.

C. If a Bidder cannot guarantee any material or equipment that is specified, or if he/she cannot furnish any surety bond that may be required, then it shall be so stated in the Proposal. Unless this is done, it shall be understood that the Bidder accepts all of the guarantee conditions called for and shall be bound thereto upon award of the Contract. If the Owner should consent to waive any requirements in this respect, then it shall have effect only if such waiver is expressly set forth in the signed Contract Agreement.

17. **NOTICE OF POLITICAL CONTRIBUTIONS:** The Bidder agrees, in accordance with Maryland Code, State Finance and Procurement Article, Paragraph 17-402, to comply with the political contribution reporting requirements under Maryland Code, Article 33, Title 14, as amended from time to time, to which the Bidder may be subject and requires that every person that enters into contracts, leases, or other agreements with the State, a county, or any incorporated municipality, or their agencies during a calendar year in which the person receives in the aggregate $100,000 or more, shall file with the State Administrative Board of Election Laws a statement disclosing contributions in excess of $500 made during the reporting period to a candidate for elective office in any primary or general election. The statement shall be filed with the State Administrative Board of Election Laws: (1) before a purchase or execution of a lease or contract by the State, a county, an incorporated municipality or their agencies, and shall cover the preceding two (2) calendar years; and (2) if the contribution is made after the execution of a lease or contract, then twice a year, throughout the contract term, on: (a) February 5, to cover the 6-month period ending January 31; and (b) August 5, to cover the 6-month period ending July 31.

18. **PAYMENT OF COUNTY AND MUNICIPAL TAXES:** Effective October 1, 1993, in compliance with Section 1-106(b)(3) of the Code of the Public Local Laws of Washington County, Maryland, "If a bidder has not paid all taxes owed to the County or a municipal corporation in the County, the County Commissioners may reject the bidder's bid."

19. **INSURANCE:** Liability insurance on all major divisions of coverage for each and every Bidder and subcontractor shall be required for the length of the contract. Bidder and subcontractor must supply evidence of insurance upon request. Each Bidder agrees to assist in every manner possible in the reporting and investigation of any accident, and upon request, agrees to cooperate with all interested insurance carriers in the handling of any claims by securing and giving evidence and obtaining the attendance of witnesses as required for any claim or suit. The Bidder shall be prepared to show evidence of insurance as required under Washington County Policy No. P-4, included herein, prior to the execution of any contract. The Bidder, if requested, shall provide the Certificate of Insurance to the Purchasing Department within ten (10) calendar days after receiving a request for it. Failure to provide an acceptable Certificate of Insurance within the time frame stated above shall be cause to terminate the contract(s). The certificate shall state that such insurance is in force and cannot be cancelled or released except upon thirty (30) days prior written notice to the County. If any of the stated coverages expire during the term of this contract, the Bidder shall deliver renewal certificates to the County at least ten (10) calendar days prior to the expiration. Washington County Policy No. P-4 – Insurance Requirements for Independent Contractors is attached.

POLICY TITLE: **Insurance Requirements for Independent Contractors**

POLICY NUMBER: P-4

ADOPTION DATE: August 29, 1989

EFFECTIVE DATE: September 1, 1989

FILING INSTRUCTIONS: _____

I. PURPOSE

To protect Washington County against liability, loss or expense due to damaged property, injury to or death of any person or persons and for care and loss of services arising in any way, out of, or in connection with or resulting from the work or service performed on behalf of Washington County.

II. ACTION

The following should be inserted in all Independent Contractor Contracts:

"The Contractor shall procure and maintain at his sole expense and until final acceptance of the work by the County, insurance as hereinafter enumerated in policies written by insurance companies admitted in the State of Maryland, have A.M. Best rating of A- or better or its equivalent, and acceptable to the County."

1. **Workers Compensation:** The Contractor agrees to comply with Workers Compensation laws of the State of Maryland and to maintain a Workers Compensation and Employers Liability Policy.

   Minimum Limits Required:

Workers Compensation -	Statutory
Employers Liability -	$100,000 (Each Accident)
	$500,000 (Disease - Policy Limit)
	$100,000 (Disease - Each Employee)

2. **Comprehensive General Liability Insurance:** The Contractor shall provide Comprehensive General Liability including Products and Completed Operations.

   Minimum Limits Required:
   $1,000,000 combined single limit for Bodily Injury and Property Damage.

   Such insurance shall protect the County, its agents, elected and appointed officials, commission members and employees, and name Washington County on the policy as additional insured against liability, loss or expense due to damaged property (including loss of use), injury to or death of any person or persons and for care and loss of services arising in any way, out of, or in connection with or resulting from the work of service performed on behalf of Washington County.

2. **Comprehensive General Liability Insurance** (continued)

   The Contractor is ultimately responsible that Subcontractors, if subcontracting is authorized, procure and maintain at their sole expense and until final acceptance of the work by the County, insurance as hereinafter enumerated in policies written by insurance companies admitted in the State of Maryland, have A.M. Best rating of A- or better or its equivalent, and acceptable to the County.

3. **Business Automobile Liability:** The Contractor shall provide Business Auto Liability including coverage for all leased, owned, non-owned and hired vehicles.

   Minimum Limits Required:
   $1,000,000 combined single limit for Bodily Injury or Property Damage.

Certificate(s) of Insurance: The Contractor shall provide certificates of insurance requiring a 30 day notice of cancellation to the Insurance Department, Board of County Commissioners of Washington County prior to the start of the applicable project.

Approval of the insurance by the County shall not in any way relieve or decrease the liability of the Contractor. It is expressly understood that the County does not in any way represent that the specified limits of liability or coverage or policy forms are sufficient or adequate to protect the interest or liabilities of the Contractor.

All responsibility for payment of any sums resulting from any deductible provisions, corridor, or self-insured retention conditions of the policy or policies shall remain with the Contractor.

General Indemnity: The Contractor shall indemnify, defend and save harmless the Board of County Commissioners of Washington County, its appointed or elected officials, commission members, employees and agents for any and all suits, legal actions, administrative proceedings, claims, demands, damages, liabilities, interest, attorneys fees, costs and expenses of whatsoever kind of nature, whether arising before or after final acceptance and in any manner directly or indirectly caused, occasioned or contributed to in whole or in part by reason of any act, error or omission, fault or negligence whether active or passive by the Contractor, or any one acting under its direction, control or on its behalf in connection with or incident to its performance of the Contract.

Revision Date: August 27, 1991
Effective Date: August 27, 1991
Revision Date: March 4, 1997
Effective Date: March 4, 1997

BID NO. PUR-1189

PROJECT BID FORMS

The following bid forms contained herein are for the convenience of the bidder and are not to be:

- detached from the specification
- filled out, or
- executed.

Separate detached duplicate copies of the bid forms will be furnished with the final addendum for the purpose of submittal of bids in duplicate.

BID NO. PUR-1189

FORM OF PROPOSAL

Submit **Form of Proposal & Schedule of Prices** on loose forms supplied by the County

ONE (1) NEW AIRCRAFT RESCUE AND FIRE FIGHTING (ARFF) TRUCK PROCUREMENT

Date: _____

Proposal of _____
(hereinafter called "Bidder"), *a corporation, organized and existing under the laws of the State of _____, a partnership, or an individual doing business as _____.

TO: Board of County Commissioners of Washington County, Maryland
c/o Washington County Purchasing Department
Washington County Administration Building
100 West Washington Street, Room 320
Hagerstown, Maryland 21740-4748

Gentlemen/Ladies:

The bidder, in compliance with your invitation for bids for the project entitled **"ARFF TRUCK PROCUREMENT"** at the Hagerstown Regional Airport - Richard A. Henson Field, Washington County, MD, has examined the specifications with related documents, hereby proposes to furnish all, materials, supplies, and other necessities, in accordance with the Contract Documents within the time set forth therein, and at the prices stated herein. These prices are to cover all expenses incurred in performing the procurement required under the Contract Documents, of which this proposal is a part.

COMPLETION TIME:

To begin the project at the time stated in the Notice to Proceed and to complete the work in accordance with the provisions of the Contract Documents.

_____
Sign for Identification

Bidder acknowledges receipt of the following Addenda:

No.____ Date_____; No.____ Date_____; No.____ Date_____;
No.____ Date_____; No.____ Date_____; No.____ Date_____;

A. **<u>TOTAL SUM</u>:**

To furnish, materials, equipment, and services necessary to properly complete the procurement required under the TOTAL SUM, based on the unit prices set forth in the attached Schedule of Prices for **"ARFF TRUCK PROCUREMENT"** at the

Hagerstown Regional Airport - Richard A. Henson Field in strict accordance with the aforesaid documents, and to deliver the equipment within two hundred seventy (270) consecutive calendar days of notice to proceed.

_____ Dollars ($_____)
(Written) (Figure)

(Amount shall be shown in both words and figures. In case of discrepancy, the amount shown in words will govern.)

B. Anticipation of the Award shall be made by the Board of County Commissioners to the responsible bidder who submits the low responsive bid based on the Total Sum Bid.

Bidder understands that the Owner reserves the right to reject any or all bids and to waive any informalities in the bidding.

The Bidder agrees that this bid shall be good and may not be withdrawn for a period of one hundred twenty (120) calendar days after the scheduled closing time for receiving bids.

Upon receipt of written notice of the acceptance of this bid, Bidder will execute the formal contract within fifteen (15) calendar days from receipt of Notice of Award.

The Bid Security attached in the sum of _____ Dollars ($_____), is to become the property of the Owner in the event the Contract and Bond are not executed within the time above set forth, as liquidated damages for the delay and additional expense to the Owner caused thereby.

Respectfully submitted.

By _____
(Signature)

_____
(Name & Title Printed)

_____
(Business Address)

_____
(Phone Number)

(SEAL) If bid is by corporation.

BID NO. PUR-1189
BID BOND

Hagerstown Regional Airport - Richard A. Henson Field
ONE (1) NEW AIRCRAFT RESCUE AND FIRE FIGHTING (ARFF) TRUCK PROCUREMENT

KNOWN ALL MEN BY THESE PRESENTS, that we_____ as Principal, hereinafter called the Principal, and _____, a corporation duly organized under the laws of the State of_____, as Surety, hereinafter called the Surety, are held and firmly bound unto the Board of County Commissioners of Washington County, Maryland, hereinafter called the County, for the sum of _____dollars (or $ _____), for the payment of which sum, the said Principal and said Surety bind ourselves, our heirs, executors, administrators, successors and assigns, jointly and severally, firmly by these presents.

WHEREAS, the Principal has submitted for a Bid for the procurement of**,** Aircraft Rescue and Firefighting (ARFF) vehicle NOW, THEREFORE, if the Principal, upon acceptance by the County of its Bid identified above, within the period specified herein for acceptance shall execute such further contractual documents, if any, and give such bond(s) as may be required by the terms of the Bid as accepted within ten working days after receipt of the forms, or in the event of failure so to execute such further contractual documents and give such bonds, if the Principal shall pay the County for any cost of procuring the work which exceeds the amount of its Bid, then the above obligation shall be void and of no effect.

The surety executing this instrument hereby agrees that its obligation shall not be impaired by any extension(s) of the time for acceptance of the Bid that the Principal may grant to the County notice of which extension(s) apply only with respect to extensions aggregating not more than one hundred twenty (120) calendar days in addition to the period originally allowed for acceptance of the Bid.

In presence of _____ Individual Principal _____

Witness _____ as_____to

_____ (Seal)

In presence of _____ Co-Partnership Principal

Witness _____ _____ (Seal)
Name of Co-Partnership

_____ as to By: _____(Seal)

_____ as to By: _____(Seal)

_____ as to By: _____(Seal)

_____
Corporate Principal

AFFIX:

By: _____ Corporate President _____(Seal)

_____
Surety

ATTEST:

_____ Title: _____
Signature President

Signature Bonding Agent's Name _____

Business Address of Surety _____

_____

Agent's Address _____

_____

PAYMENT BOND

Board of County Commissioners of Washington County, Maryland

BOND NO. _____ **CONTRACT NO. PUR-1189_____**

Date Bond Executed: _____

KNOW ALL MEN BY THESE PRESENTS, that we _____

_____

(Here insert full name and address or legal title of Contractor, including zip code)

hereinafter called the **Principal** and _____

_____

(Here insert full name and address or legal title of Surety, including zip code)

a corporation organized and existing under the laws of the State of _____, and authorized to transact business in the State of Maryland, hereinafter called the **Surety**, are held and firmly bound unto the Board of County Commissioners of Washington County, Maryland, a body corporate and politic, hereinafter called the **County**, for the use and benefit of claimants as hereinafter defined, in the Penal Sum of _____Dollars ($_____) lawful money, for the payment of which Penal Sum we bind ourselves, our heirs, executors, administrators, personal representatives, successors, and assigns, jointly and severally, firmly by these presents.

WHEREAS, the Principal has entered into or will enter into a contract with the County, for the *ARFF TRUCK PROCUREMENT at the Hagerstown Regional Airport - Richard A. Henson Field in Washington County, Maryland*. The contract and all items incorporated into the contract, together with any and all changes, extensions of time, alterations, modifications, or additions to the contract or to the equipment to be procured thereunder or to the Specifications, and Special Provisions, or any of them, or to any other items incorporated into the contract shall hereinafter be referred to as the **Contract**.

WHEREAS, it is one of the conditions precedent to the final award of the Contract that these presents be executed.

NOW, THEREFORE, the condition of this obligation is such that if the Principal shall promptly make payment to all claimants as hereinafter defined, for all labor and materials furnished, supplied and reasonably required for use in the performance of the Contract, then this obligation shall be null and void, otherwise it shall remain in full force and effect, subject to the following conditions:

1. A **Claimant** is defined to be any and all of those persons supplying labor and materials (including lessors of the equipment to the extent of the fair market value thereof) to the Principal or its subcontractors and sub-subcontractors in the procurement of the equipment

provided for the Contract, entitled to the protection provided by Md. Code Ann., State Finance and Procurement Article, §§ 17-101, *et seq.*, as from time to time amended.

2. The above-named Principal and Surety hereby jointly and severally agree with the County that every claimant as herein defined, who has not been paid in full may, pursuant to and when in compliance with the provisions of the aforesaid State Finance and Procurement Article, §§ 17-101, *et seq.*, sue on this Bond for the use of such claimant, prosecute the suit to final judgment for such sum or sums as may be justly due claimant and have execution thereon. The County shall not be liable for the payment of any costs or expenses of any such suit.

The Surety hereby stipulates and agrees that no change, extension of time, alteration, or addition to the terms of the Contract or to the equipment to be procured thereunder of the Specifications accompanying the same shall in any way affect its obligations on this Payment Bond, and it does hereby waive notice of any such change, extension of time, alteration or addition to the terms of the Contract or to the equipment or the Specifications.

This Payment Bond shall be governed and construed in accordance with the laws of the State of Maryland and any reference herein to the Principal or Surety in the singular shall include all entities in the plural who or which are signatories under the Principal or Surety heading below.

IN WITNESS WHEREOF, the Principal and Surety have set their hands and seals to this Payment Bond this _____ day of _____, 2013.

WITNESS:

_____
(Typed Name of Principal)

_____ BY:_____
(SEAL)

_____
(Typed Name and Title)

WITNESS:

_____
(Typed Name of Surety)

_____ BY: _____
(SEAL)

_____
(Typed Name and Title)

_____
(Name of Local Agent)

(_____) _____
(Telephone Number of Local Agent)

PERFORMANCE BOND

Board of County Commissioners of Washington County, Maryland

BOND NO. _____ **CONTRACT NO. ___PUR-1189_____**

Date Bond Executed:_____

KNOW ALL MEN BY THESE PRESENTS, that we_____

_____,
(Here insert full name and address or legal title of Contractor, including zip code)

a corporation of the State of _____ and authorized to do business in the State of Maryland, hereinafter called the **Principal** and _____

_____
(Here insert full name and address or legal title of Surety, including zip code)

hereinafter called the **Surety**, are held and firmly bound unto the Board of County Commissioners of Washington County, Maryland, hereinafter called the **County**, the sum of Dollars ($_____) lawful money of the United States for the payment of which sum well and truly to be made, the Principal and the Surety bind themselves, their heirs, personal representatives, successors and assigns, jointly and severally, firmly by these presents.

WHEREAS, the Principal has entered into or will enter into a contract with the County for *the ARFF TRUCK PROCUREMENT at the Hagerstown Regional Airport – Richard A. Henson Field, in Washington County, Maryland,* which contract and procurement to be done thereunder and the specifications accompanying the same shall be deemed a part hereof and incorporated by reference herein to the same extent as if fully set forth.

NOW, THEREFORE, during the original term of said Contract, during any extensions thereto that may be granted by the County, and during the guarantee and warranty period, if any, required under the Contract, unless otherwise stated therein, this Performance Bond shall remain in full force and effect unless and until the following terms and conditions are met:

1. Principal shall well and truly perform the Contract; and

2. Principal and Surety shall comply with the terms and conditions in this Performance Bond.

Whenever Principal shall be declared by the County to be in default under the Contract, the Surety may, within 15 days after notice of default from the County, notify the County of its election to either promptly proceed to remedy the default or promptly proceed to complete the contract in accordance with and subject to its terms and conditions. In the event the Surety does not elect to

exercise either of the above stated options, then the County thereupon shall have the remaining contract work completed, Surety to remain liable hereunder for all expenses of completion up to but not exceeding the penal sum stated above.

The Surety for value received hereby stipulates and agrees that no change, extension of time, alteration, or addition to the terms of the Contract or to the equipment to be procured thereunder of the Specifications accompanying the same shall in any way affect its obligations on this Performance Bond, and it does hereby waive notice of any such change, extension of time, alteration or addition to the terms of the Contract or to the work to be performed thereunder of the specifications accompanying the same.

This Performance Bond shall be governed by and construed in accordance with the laws of the State of Maryland and any reference herein to Principal or Surety in the singular shall include all entities in the plural who or which are signatories under the Principal or Surety heading below.

IN WITNESS WHEREOF, Principal and Surety have set their hands and seals to this Performance Bond. If any individual is a signatory under the Principal heading below, then each such individual has signed below on his or her own behalf, has set forth below the name of the firm, if any, in whose name he or she is doing business, and has set forth below his or her title as a sole proprietor. If any partnership or joint venture is a signatory under the Principal heading below, then all members of each such partnership or joint venture, and each member has set forth below his or her title as a general partner, limited partner, or member of joint venture, whichever is applicable. If any corporation is a signatory under the Principal or Surety heading below, then each such corporation has caused the following: the corporation's name to be set forth below, a duly authorized representative of the corporation to affix below the corporation's seal and to attach hereto a notarized corporate resolution or power of attorney authorizing such action, and each such duly authorized representative to sign below and to set forth below his or her title as a representative of the corporation. If any individual acts as a witness to any signature below, then each such individual has signed below and has set forth below his or her title as a witness. All of the above has been done as of the Date of Bond shown above.

Signed, and sealed this _____ day of _____, 2013, in three counterparts each of which shall without proof of accounting for the other counterparts be deemed an original hereof.

WITNESS:

_____
(Typed Name of Principal)

_____ BY:_____
(SEAL)

_____
(Typed Name and Title)

WITNESS:

_____
(Typed Name of Surety)

_____ BY: _____
(SEAL)

_____
(Typed Name and Title)

_____
(Name of Local Agent)

( )_____
(Telephone Number of Local Agent)

Revised 3/30-98

BIDDER'S AFFIDAVIT

1. Authorized Representative:

I HEREBY DECLARE AND AFFIRM that I am the _____ and duly

authorized representative of the firm of _____
(Title)

whose address is _____and that

I am duly authorized on behalf of said firm to make this Affidavit.

2. Bribery:

I FURTHER DECLARE AND AFFIRM that neither I, nor, to the best of my knowledge, information and belief, the above firm, nor any officer, director or partner of the above firm, nor any employee of the above firm directly involved in obtaining contracts with the State of Maryland, or any county or other subdivision of the State of Maryland, has been convicted* of bribery, attempted bribery, or conspiracy to bribe under the laws of any state or the Federal Government; except as herein expressly stated (if any):

* As used in the word "convicted" includes an accepted plea of nolo contendere.

3. Non-Collusion:

In connection with the firm's price proposal for the above-captioned contract, as submitted to Washington County, Maryland, I HEREBY DECLARE AND AFFIRM, to the best of my knowledge, information and belief, that:

1. Said proposal has been independently prepared without collusion by any officer, director, partner, employee or other representative of this firm, with any other proposer, or with any competitor; that

2. No attempt has been or, hereafter, will be made by any officer, director, partner, employee or other representative of this firm to induce any other person, firm or entity to submit or not submit a proposal; that

3. Any unit or total price in this proposal has not been knowingly disclosed and will not be knowingly disclosed prior to its official opening, directly or indirectly, to any other bidder or to any competitor; and, that

4. I have fully informed myself regarding the accuracy of the statements contained herein.

I acknowledge that this Affidavit is to be furnished to the Secretary of the Maryland Department of Transportation and may be distributed to boards, commissions, administrations, departments and agencies of the State of Maryland, counties or other subdivisions of the State of Maryland, other states and the Federal Government. I further acknowledge that this Affidavit is subject to applicable laws of the State of Maryland, both criminal and civil, and that this Affidavit is to be attached to and become a part of the contract when and if awarded and executed.

I FURTHER HEREBY DECLARE AND AFFIRM that I and the firm I herein represent, acknowledge and agree that if any misrepresentation is herein made, the Board of County Commissioners of Washington County, in their discretion, shall have the right to reject this proposal or terminate the contract, without liability, (as the case may be).

I DO SOLEMNLY DECLARE AND AFFIRM UNDER THE PENALTIES OF PERJURY THAT THE CONTENTS OF THE FOREGOING DOCUMENT ARE TRUE AND CORRECT.

_____ By: _____
(Date) (Affiant)

Title: _____

For: _____

State of _____:

County (City of) _____:

On this _____ day of _____, 2013, before me, _____ the

undersigned officer, personally appeared _____, known to me to be the person described in the foregoing Affidavit and acknowledged that he (she) executed the same in the capacity therein stated and for the purposes therein contained.

In witness whereof, I hereunto set my hand and official seal.

_____
NOTARY PUBLIC

My commission expires _____ NOTARY SEAL

FORM OF NON-COLLUSION AFFIDAVIT

State of Maryland)
) S.S.
County of _____

Bid Identification: "**AIRCRAFT RESCUE AND FIRE FIGHTING (ARFF) TRUCK PROCUREMENT"** at the Hagerstown Regional Airport; FAA AIP No. 3-24-0019-048 at Hagerstown Regional Airport - Richard A. Henson Field, Washington County, Maryland.

Contractor: _____, _____,
(Firm Name) (Officer's Name)

being first duly sworn, deposes and says that he is _____ (sole owner, a partner, president, secretary, etc.) of _____, the party making the foregoing bid; that such bid is not made in the interest of or on behalf of any undisclosed person, partnership, company, association, organization, or corporation; that such bid is genuine and not collusive or sham; that said bidder has not directly or indirectly induced or solicited any other bidder to put in a false or sham bid, and has not directly or indirectly colluded, conspired, connived, or agreed with any bidder or anyone else to put in a sham bid, or that anyone shall refrain from bidding; that said bidder has not in any manner, directly or indirectly, sought by agreement, communication, or conference with anyone to fix the bid price of said bidder or of any other bidder, or to fix any overhead, profit, or cost element of such bid price, or of that of any other bidder, or to secure any advantage against the public body awarding the Contract or anyone else interested in the proposed Contract; that all statements contained in such bid are true: and further, that said bidder has not, directly or indirectly, submitted his bid price or any breakdown thereof, or the contents thereof, or divulged information or data relative thereto, or paid and will not pay any fee in connection therewith, to any corporation, partnership, company, association, organization, bid deposit, or to any member or agent thereof, or to any other individual except to such person or persons as have a partnership or other financial interest with said bidder in his general business.

Signed:

Subscribed and sworn to before me this _____

_____ day of _____ 2013

Seal of Notary

_____
(Notary Public)

CERTIFICATION OF NON-SEGREGATED FACILITIES

The federally assisted construction contractor certifies that it does not maintain or provide, for its employees, any segregated facilities at any of its establishments and that it does not permit employees to perform services where segregated facilities are maintained. The federally assisted construction contractor certifies further that it will not maintain or provide, for its employees, segregated facilities at any of its establishments, and that it will not permit its employees to perform services at any location, under its control, where segregated facilities are maintained. The federally assisted construction contractor agrees that a breach of this certification is a violation of the equal opportunity clause in this contract. As used in this certification, the term "segregated facilities" means any waiting rooms, work areas, restrooms and washrooms, restaurants and other eating area, time clocks, locker rooms and other storage or dressing areas, parking lots, drinking fountains, recreation or entertainment areas, transportation and housing facilities pro-vided for employees which are segregated by explicit directives or are in fact segregated on the basis of race, color, religion, or national origin because of habit, local custom, or any other reason. The federally assisted construction contractor agrees that (except where he has obtained identical certifications from proposed subcontractors for specific time periods) he will obtain identical certifications from proposed subcontractors prior to the award of subcontracts exceeding $10,000 which are not exempt from the provisions of the equal opportunity clause and that he will retain such certifications in his files.

NOTICE TO PROSPECTIVE CONTRACTORS OF REQUIREMENT FOR CERTIFICATION FOR NONSEGREGATED FACILITIES:

> A Certification of Non-segregated Facilities must be submitted prior to the award of a contract or subcontract exceeding $10,000 which is not exempt from the provisions of the equal opportunity clause.

Certification - The information above is true and complete to the best of my knowledge and belief.

_____

Name and Title of Signer (Please Type)

_____ _____

Signature Date

NOTE: The penalty for making false statements in offers is prescribed in 18 U.S.C. 1001.

BIDDERS NAME: _____

ADDRESS: _____

INTERNAL REVENUE SERVICE EMPLOYER IDENTIFICATION NUMBER:

_____

BUY AMERICAN PREFERENCES

(a) The Aviation Safety and Capacity Expansion Act of 1990 provides that preference be given to steel and manufactured products produced in the United States when funds are expended pursuant to a grant issued under the Airport Improvement Program. The following terms apply:

1. Steel and manufactured products. As used in this clause, steel and manufactured products include (1) steel produced in the United States or (2) a manufactured product produced in the United States, if the cost of its components mined, produced or manufactured in the United States exceeds 60 percent of the cost of all its components and final assembly has taken place in the United States. Components of foreign origin of the same class or kind as the products referred to in subparagraphs b. (1) or (2) shall be treated as domestic.

2. Components. As used in this clause, components means those articles, materials, and supplies incorporated directly into steel and manufactured products.

3. Cost of Components. This means the costs for production of the components, exclusive of final assembly labor costs.

(b) The successful bidder will be required to assure that only domestic steel and manufactured products will be used by the Contractor, subcontractors, materialmen and suppliers in the performance of this contract, except those:

1. that the US Department of Transportation has determined, under the Aviation Safety and Capacity Expansion Act of 1990, are not produced in the United States in sufficient and reasonably available quantities and of a satisfactory quality;

2. that the US Department of Transportation has determined, under the Aviation Safety and Capacity Expansion Act of 1990, that domestic preference would be inconsistent with the public interest; or

3. that inclusion of domestic material will increase the cost of the overall project contract by more than 25 percent.

BUY AMERICAN CERTIFICATE

By submitting a bid/proposal under this solicitation, except for those items listed by the offeror below or on a separate and clearly identified attachment to this bid/proposal, the offeror certifies that steel and each manufactured product, are produced in the United States, as defined in the clause Buy American - Steel and Manufactured Products for Construction Contracts) and that components of unknown origin are considered to have been produced or manufactured outside the United States.

Offerors may obtain from the owner a listing of articles, materials and supplies excepted from this provision.

Product	Country of Origin

Application
Incorporate into all construction and equipment procurements. Paragraphs (a) and (b) should be placed in the solicitation. The Buy American certificate should be placed in the contract documents.

Reference
Section 9129 of the Aviation Safety and Capacity Expansion Act of 1990
Title 49 U.S.C. Chapter 501
AIP Program Guidance Letter 91-3

CIVIL RIGHTS ACT OF 1964, TITLE VI – CONTRACTOR CONTRACTUAL REQUIREMENTS

During the performance of this contract, the contractor, for itself, its assignees and successors in interest (hereinafter referred to as the "contractor") agrees as follows:

1.1 Compliance with Regulations. The contractor shall comply with the Regulations relative to nondiscrimination in federally assisted programs of the Department of Transportation (hereinafter, "DOT") Title 49, Code of Federal Regulations, Part 21, as they may be amended from time to time (hereinafter referred to as the Regulations), which are herein incorporated by reference and made a part of this contract.

1.2 Nondiscrimination. The contractor, with regard to the work performed by it during the contract, shall not discriminate on the grounds of race, color, or national origin in the selection and retention of subcontractors, including procurements of materials and leases of equipment. The contractor shall not participate either directly or indirectly in the discrimination prohibited by section 21.5 of the Regulations, including employment practices when the contract covers a program set forth in Appendix B of the Regulations.

1.3 Solicitations for Subcontracts, Including Procurements of Materials and Equipment. In all solicitations either by competitive bidding or negotiation made by the contractor for work to be performed under a subcontract, including procurements of materials or leases of equipment, each potential subcontractor or supplier shall be notified by the contractor of the contractor's obligations under this contract and the Regulations relative to nondiscrimination on the grounds of race, color, or national origin.

1.4 Information and Reports. The contractor shall provide all information and reports required by the Regulations or directives issued pursuant thereto and shall permit access to its books, records, accounts, other sources of information, and its facilities as may be determined by the Sponsor or the Federal Aviation Administration (FAA) to be pertinent to ascertain compliance with such Regulations, orders, and instructions. Where any information required of a contractor is in the exclusive possession of another who fails or refuses to furnish this information, the contractor shall so certify to the sponsor or the FAA, as appropriate, and shall set forth what efforts it has made to obtain the information.

1.5 Sanctions for Noncompliance. In the event of the contractor's noncompliance with the nondiscrimination provisions of this contract, the sponsor shall impose such contract sanctions as it or the FAA may determine to be appropriate, including, but not limited to:

a. Withholding of payments to the contractor under the contract until the contractor complies, and/or
b. Cancellation, termination, or suspension of the contract, in whole or in part.

1.6 Incorporation of Provisions. The contractor shall include the provisions of paragraphs 1 through 5 in every subcontract, including procurements of materials and leases of equipment, unless exempt by the Regulations or directives issued pursuant thereto. The contractor shall take such action with respect to any subcontract or procurement as the sponsor or the FAA may direct as a means of enforcing such provisions including sanctions for noncompliance. Provided, however, that in the event a contractor becomes involved in, or is threatened with, litigation with a subcontractor or supplier as a result of such direction, the contractor may request the Sponsor to enter into such litigation to protect the interests of the sponsor and, in addition, the contractor may request the United States to enter into such litigation to protect the interests of the United States.

Application
Required in all contracts and subcontracts

Reference
49 CFR Part 21
AC 150/5100-15

AIRPORT AND AIRWAY IMPROVEMENT ACT OF 1982, SECTION 520 - GENERAL CIVIL RIGHTS PROVISIONS

The contractor assures that it will comply with pertinent statutes, Executive orders and such rules as are promulgated to assure that no person shall, on the grounds of race, creed, color, national origin, sex, age, or handicap be excluded from participating in any activity conducted with or benefiting from Federal assistance. This provision obligates the tenant/concessionaire/lessee or its transferee for the period during which Federal assistance is extended to the airport a program, except where Federal assistance is to provide, or is in the form of personal property or real property or interest therein or structures or improvements thereon. In these cases the provision obligates the party or any transferee for the longer of the following periods: (a) the period during which the property is used by the airport sponsor or any transferee for a purpose for which Federal assistance is extended, or for another purpose involving the provision of similar services or benefits or (b) the period during which the airport sponsor or any transferee retains ownership or possession of the property. In the case of contractors, this provision binds the contractors from the bid solicitation period through the completion of the contract. This provision is in addition to that required of Title VI of the Civil Rights Act of 1964.

Application
Incorporate in all contracts funded under AIP

Reference
Airport and Airway Improvement Act of 1982, Section 520
Title 49 47123
AC 150/5100-15, Para. 10.c.

LOBBYING AND INFLUENCING FEDERAL EMPLOYEES

(1) No Federal appropriated funds shall be paid, by or on behalf of the contractor, to any person for influencing or attempting to influence an officer or employee of any agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with the making of any Federal grant and the amendment or modification of any Federal grant.

(2) If any funds other than Federal appropriated funds have been paid or will be paid to any person for influencing or attempting to influence an officer or employee of any agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with any Federal grant, the contractor shall complete and submit Standard Form-LLL, "Disclosure of Lobby Activities," in accordance with its instructions.

Application
Required in all contracts and subcontracts

Reference
49 CFR Part 20, Appendix A

ACCESS TO RECORDS AND REPORTS

The Contractor shall maintain an acceptable cost accounting system. The Contractor agrees to provide the Sponsor, the Federal Aviation Administration and the Comptroller General of the United States or any of their duly authorized representatives access to any books, documents, papers, and records of the contractor which are directly pertinent to the specific contract for the purpose of making audit, examination, excerpts and transcriptions. The Contractor agrees to maintain all books, records and reports required under this contract for a period of not less than three years after final payment is made and all pending matters are closed.

Application
Incorporate into all procurement contracts that funded by AIP funds

Reference
49 CFR Part 18.36(i)
FAA Order 5100.38

DISADVANTAGED BUSINESS ENTERPRISES

Contract Assurance (§26.13) - The contractor or subcontractor shall not discriminate on the basis of race, color, national origin, or sex in the performance of this contract. The contractor shall carry out applicable requirements of 49 CFR Part 26 in the award and administration of DOT assisted contracts. Failure by the contractor to carry out these requirements is a material breach of this contract, which may result in the termination of this contract or such other remedy, as the recipient deems appropriate.

Prompt Payment (§26.29) - The prime contractor agrees to pay each subcontractor under this prime contract for satisfactory performance of its contract no later than 30 days from the receipt of each payment the prime contractor receives from the County. The prime contractor agrees further to return retainage payments to each subcontractor within 30 days after the subcontractor's work is satisfactorily completed. Any delay or postponement of payment from the above referenced time frame may occur only for good cause following written approval of the County. This clause applies to both DBE and non-DBE subcontractors.

Application
The contract assurance clause shall be incorporated verbatim. The prompt payment clause represents sample language that meets the requirements of 49 CFR Part 26.29. Recipients should refer to the language included their approved DBE program

Reference
49 CFR Part 26

ENERGY CONSERVATION REQUIREMENTS

The contractor agrees to comply with mandatory standards and policies relating to energy efficiency that are contained in the state energy conservation plan issued in compliance with the Energy Policy and Conservation Act (Public Law 94-163)

Application
The regulation does not prescribe the language for the requirement. The above clause represents sample language that meets the intent of 49 CFR Part 18.36(i)(13)

Reference
49 CFR Part 18.36
Public Law 94-163

BREACH OF CONTRACT TERMS

Any violation or breach of terms of this contract on the part of the contractor or their subcontractors may result in the suspension or termination of this contract or such other action that may be necessary to enforce the rights of the parties of this agreement. The duties and obligations imposed by the Contract Documents and the rights and remedies available thereunder shall be in addition to and not a limitation of any duties, obligations, rights and remedies otherwise imposed or available by law.

Application

The above clause is meant to represent language that addresses the requirements of 49 CFR Part 18.36(i)(1). This provision requires grantees to incorporate administrative, contractual or legal remedies in instances where contractors violate or breach contract terms.

This provision is required in all contracts that exceed the simplified acquisition threshold, presently set at $100,000.

Reference
49 CFR Part 18.36

RIGHTS TO INVENTIONS

All rights to inventions and materials generated under this contract are subject to regulations issued by the FAA and the Sponsor of the Federal grant under which this contract is executed.

Application
Incorporate into all procurement contracts that funded by AIP funds

Reference
49 CFR Part 18.36(i)(8)
FAA Order 5100.38

TRADE RESTRICTION CLAUSE

The contractor or subcontractor, by submission of an offer and/or execution of a contract, certifies that it:

a. is not owned or controlled by one or more citizens of a foreign country included in the list of countries that discriminate against U.S. firms published by the Office of the United States Trade Representative (USTR);

b. has not knowingly entered into any contract or subcontract for this project with a person that is a citizen or national of a foreign country on said list, or is owned or controlled directly or indirectly by one or more citizens or nationals of a foreign country on said list;

c. has not procured any product nor subcontracted for the supply of any product for use on the project that is produced in a foreign country on said list.

Unless the restrictions of this clause are waived by the Secretary of Transportation in accordance with 49 CFR 30.17, no contract shall be awarded to a contractor or subcontractor who is unable to certify to the above. If the contractor knowingly procures or subcontracts for the supply of any product or service of a foreign country on said list for use on the project, the Federal Aviation Administration may direct through the Sponsor cancellation of the contract at no cost to the Government.

Further, the contractor agrees that, if awarded a contract resulting from this solicitation, it will incorporate this provision for certification without modification in each contract and in all lower tier subcontracts. The contractor may rely on the certification of a prospective subcontractor unless it has knowledge that the certification is erroneous.

The contractor shall provide immediate written notice to the sponsor if the contractor learns that its certification or that of a subcontractor was erroneous when submitted or has become erroneous by reason of changed circumstances. The subcontractor agrees to provide written notice to the contractor if at any time it learns that its certification was erroneous by reason of changed circumstances.

This certification is a material representation of fact upon which reliance was placed when making the award. If it is later determined that the contractor or subcontractor knowingly rendered an erroneous certification, the Federal Aviation Administration may direct through the Sponsor cancellation of the contract or subcontract for default at no cost to the Government.

Nothing contained in the foregoing shall be construed to require establishment of a system of records in order to render, in good faith, the certification required by this provision. The knowledge and information of a contractor is not required to exceed that which is normally possessed by a prudent person in the ordinary course of business dealings.

This certification concerns a matter within the jurisdiction of an agency of the United States of America and the making of a false, fictitious, or fraudulent certification may render the maker subject to prosecution under Title 18, United States Code, Section 1001.

Application
Incorporate into all contracts funded by AIP.

Reference
49 CFR Part 30.13
FAA Order 5100.38

TERMINATION OF CONTRACT

a. The Sponsor may, by written notice, terminate this contract in whole or in part at any time, either for the Sponsor's convenience or because of failure to fulfill the contract obligations. Upon receipt of such notice services shall be immediately discontinued (unless the notice directs otherwise) and all materials as may have been accumulated in performing this contract, whether completed or in progress, delivered to the Sponsor.

b. If the termination is for the convenience of the Sponsor, an equitable adjustment in the contract price shall be made, but no amount shall be allowed for anticipated profit on unperformed services.

c. If the termination is due to failure to fulfill the contractor's obligations, the Sponsor may take over the work and prosecute the same to completion by contract or otherwise. In such case, the contractor shall be liable to the Sponsor for any additional cost occasioned to the Sponsor thereby.

d. If, after notice of termination for failure to fulfill contract obligations, it is determined that the contractor had not so failed, the termination shall be deemed to have been effected for the convenience of the Sponsor. In such event, adjustment in the contract price shall be made as provided in paragraph 2 of this clause.

e.The rights and remedies of the sponsor provided in this clause are in addition to any other rights and remedies provided by law or under this contract.

Application
Incorporate into all procurement contracts that funded by AIP funds that exceed $10,000.

Reference
49 CFR Part 18.36(i)(2)
FAA Order 5100.38

CERTIFICATION REGARDING DEBAREMENT, SUSPENSION, INELIGIBILITY AND VOLUNTARY EXCLUSION

The bidder/offeror certifies, by submission of this proposal or acceptance of this contract, that neither it nor its principals is presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from participation in this transaction by any Federal department or agency. It further agrees by submitting this proposal that it will include this clause without modification in all lower tier transactions, solicitations, proposals, contracts, and subcontracts. Where the bidder/offeror/contractor or any lower tier participant is unable to certify to this statement, it shall attach an explanation to this solicitation/proposal.

Application
Incorporate into all contracts that exceed $25,000, which funded under the AIP. Incorporate in all contracts for auditing services regardless of the contract amount.

Reference
49 CFR Part 29
FAA Order 5100.38

CLEAN AIR AND WATER POLLUTION CONTROL

Contractors and subcontractors agree:

a. That any facility to be used in the performance of the contract or subcontract or to benefit from the contract is not listed on the Environmental Protection Agency (EPA) List of Violating Facilities;

b. To comply with all the requirements of Section 114 of the Clean Air Act, as amended, 42 U.S.C. 1857 et seq. and Section 308 of the Federal Water Pollution Control Act, as amended, 33 U.S.C. 1251 et seq. relating to inspection, monitoring, entry, reports, and information, as well as all other requirements specified in Section 114 and Section 308 of the Acts, respectively, and all other regulations and guidelines issued thereunder;

c. That, as a condition for the award of this contract, the contractor or subcontractor will notify the awarding official of the receipt of any communication from the EPA indicating that a facility to be used for the performance of or benefit from the contract is under consideration to be listed on the EPA List of Violating Facilities;

d. To include or cause to be included in any construction contract or subcontract which exceeds $ 100,000 the aforementioned criteria and requirements.

Application
Incorporate in all contracts and subcontracts that exceed $100,000.

Reference
49 CFR Part 18.36(i)(12)
Section 306 of the Clean Air Act
Section 508 of the Clean Water Act

SPECIFICATION

FOR

AIRPORT RESCUE AND FIRE FIGHTING (ARFF) VEHICLE

FOR

HAGERSTOWN REGIONAL - RICHARD A HENSON FIELD

WITH AGENT CAPACITIES OF

1500 GALLONS OF WATER

210 GALLONS OF AQUEOUS FILM FORMING FOAM (AFFF) CONCENTRATE

450 POUNDS OF PURPLE K

This specification covers a latest model year, all-wheel drive, diesel powered ARFF vehicle having a mechanical foam/water system designed for extinguishing flammable and combustible liquid fuel fires. The specified dry chemical complimentary agent system is an addition to the basic vehicle as dictated by local operational needs. The primary function of the vehicle described in this specification is to provide an optimum level of ARFF suppression capability throughout the critical rescue and firefighting access area for the lowest practical cost. Vehicles complying with this specification meet the ARFF vehicle requirements of FAR Part 139 Index B. However, it is also intended that this vehicle be suitable for other fire protection assignments.

This vehicle is to be designed for a degree of off-pavement mobility not normally found in highway vehicles. The vehicle payload consists principally of the minimum usable (rated capacity) quantities of water and sufficient quantity of 3% AFFF foam concentrate to support four times the water quantity.

JUNE 15,2012

3.4 VEHICLE PROCUREMENT SPECIFICATION, CLASS 4 AIRCRAFT RESCUE AND FIRE FIGHTING (ARFF) VEHICLE

(Submit with Form of Proposal)

1. SCOPE	Remarks / Exceptions
This Procurement Specification (PS) covers a commercially produced diesel engine driven ARFF vehicle for an Index B airport. It includes a 1500 gallon water/Aqueous Film Forming Foam (AFFF) fire suppression system: 450 lb potassium-based dry chemical only. The ARFF vehicle is intended to carry rescue and fire fighting equipment for the purpose of rescuing aircraft passengers, preventing aircraft fire loss, and combating fires in aircraft.	

2. CLASSIFICATION	Remarks / Exceptions
The ARFF vehicle(s) covered by this PS are classified in accordance with Part 139, Certification and Operations: Land Airports Serving Certain Air Carriers, Section 315, Aircraft Rescue and Firefighting: Index Determination; Section 317, Aircraft Rescue and Firefighting: Equipment and Agents; and Federal Aviation Administration (FAA) Advisory Circular (AC) 150/5220-10, Guide Specification for Aircraft Rescue and Fire Fighting (ARFF) Vehicles, as follows:	

Airport Index	Vehicle Class	Minimum Rated Capacities (gallons/liters)
Index B	4	1500 gallon (5678 liter) water/AFFF solution

3. VEHICLE CONFORMANCE/PERFORMANCE CHARACTERISTICS		Remarks / Exceptions
The ARFF vehicle will be in accordance with the applicable requirements of National Fire Protection Association (NFPA) 414, Standard for Aircraft Rescue and Fire Fighting Vehicles (2007 Edition), and AC 150/5220-10, Guide Specification for Aircraft Rescue and Fire Fighting (ARFF) Vehicles.		
3.1	General Administration Requirements	
3.1.1.	Manuals: Technical manuals will consist of operator, service, and parts manuals. All manuals are required to be provided in hardcopy and in digital format on CDs when requested.	

3. VEHICLE CONFORMANCE/PERFORMANCE CHARACTERISTICS		Remarks / Exceptions
3.1.1.1	Technical manuals. The overall format for the manuals will be commercial. Each technical manual will have a title page. Line art will be used to the maximum extent possible for illustrations and parts lists. One complete set of engine and transmission parts, service and operator's manuals will be packed with each vehicle.	
	a. The contractor will provide digitized manuals in CD format when requested in addition to or in place of printed paper copies.	
	b. The contractor will provide two complete sets of hardcopy manuals and / or CDs when requested.	
3.1.1.1.1	Operator's manual. The operator's manual will include all information required for the safe and efficient operation of the vehicle, including fire extinguishing systems, equipment, and any special attachments or auxiliary support equipment. As a minimum, the operator's manual will include the following:	
	a. The location and function of all controls and instruments will be illustrated and functionally described.	
	b. Safety information that is consistent with the safety standards established by the Occupational Safety and Health Administration (OSHA) and NFPA.	
	c. All operational and inspection checks and adjustments in preparation for placing the vehicle into service upon receipt from the manufacturer.	
	d. Tie down procedures for transport on a low-boy trailer.	
	e. Warranty information and the period of the warranty coverage for the complete vehicle and for any component warranty that exceeds the warranty of the complete vehicle. Addresses and telephone numbers will be provided for all warranty providers.	
	f. General description and necessary step-by-step instructions for the operation of the vehicle and its fire extinguishing system(s) and auxiliary equipment.	
	g. A description of the post-operational procedures (draining, flushing, re-servicing, et cetera).	
	h. Daily maintenance inspection checklists that the operator is expected to perform, including basic troubleshooting procedures.	
	i. Disabled vehicle towing procedures.	
	j. Procedures and equipment required for changing a tire.	

3. VEHICLE CONFORMANCE/PERFORMANCE CHARACTERISTICS		Remarks / Exceptions
3.1.1.1.1	k. Schedules (hours, miles, time periods) for required preventative maintenance and required periodic maintenance.	
	l. Line art drawing of the vehicle, including panoramic views (front, rear, left, and right sides) showing basic dimensions and weights (total vehicle and individual axle weight for the unloaded and fully loaded vehicle). For the purposes of this AC, "unloaded" is defined as a lack of agent, occupants and compartment load, and "loaded" is defined as including agent, occupants and compartment load.	
3.1.1.1.2	Service manual. The service manual will identify all special tools and test equipment required to perform servicing, inspection, and testing. The manual will cover troubleshooting and maintenance as well as minor and major repair procedures. The text will contain performance specifications, tolerances, and fluid capacities; current, voltage, and resistance data; test procedures; and illustrations and exploded views as may be required to permit proper maintenance by qualified vehicle mechanics. The manual will contain an alphabetical subject index as well as a table of contents. The service manual will contain at least the following, where applicable:	
	a. Fire fighting system schematic(s).	
	b. Hydraulic schematic.	
	c. Pneumatic schematic.	
	d. Electrical schematic.	
	e. Winterization schematic.	
	f. Fuel schematic.	
	g. Schedules for required preventative maintenance and required periodic maintenance.	
	h. Lubrication locations, procedures, and intervals for parts of the vehicle and equipment that require lubrication.	

3. VEHICLE CONFORMANCE/PERFORMANCE CHARACTERISTICS		Remarks / Exceptions
3.1.1.1.3	Parts identification manual. The parts manual will include illustrations or exploded views (as needed) to identity properly all parts, assemblies, subassemblies, and special equipment. All components of assemblies shown in illustrations or exploded views will be identified by reference numbers that correspond to the reference numbers in the parts lists. All purchased parts will be cross-referenced with the original equipment manufacturer's (OEM) name and part number. The parts identification manual will provide the description and quantity of each item used for each vehicle. The size, thread dimensions, torque specifications, and special characteristics will be provided for all nonstandard nuts, bolts, screws, washers, grease fittings, and similar items. The manual will contain a numerical index. The parts manual will contain a list of all of the component vendor names, addresses, and telephone numbers referenced in the parts list.	
3.1.2	Painting, plating, and corrosion control.	
3.1.2.1	Finish. Exterior surfaces will be prepared, primed, and painted in accordance with all of the paint manufacturer's instructions and recommendations. Vehicles will be painted and marked in accordance with AC 150/5210-5, Painting, Marking, and Lighting of Vehicles Used on an Airport. The interior finish of all compartments will be based on the manufacturer's standard production practice. This may include painting, texturing, coating or machine swirling as determined by the manufacturer. All bright metal and anodized parts, such as mirrors, horns, light bezels, tread plates, and roll-up compartment doors, will not be painted. All other surfaces capable of being painted must be in the appropriate yellow-green color.	
3.1.2.2	Dissimilar metals. Dissimilar metals, as defined in MIL-STD-889, Dissimilar Metals, will not be in contact with each other. Metal plating or metal spraying of dissimilar base metals to provide electromotively compatible abutting surfaces is acceptable. The use of dissimilar metals separated by suitable insulating material is permitted, except in systems where bridging of insulation materials by an electrically conductive fluid can occur.	
3.1.2.3	Protection against deterioration. Materials that deteriorate when exposed to sunlight, weather, or operational conditions normally encountered during service will not be used or will have a means of protection against such deterioration that does not prevent compliance with performance requirements. Protective coatings that chip, crack, or scale with age or extremes of climatic conditions or when exposed to heat will not be used.	

3. VEHICLE CONFORMANCE/PERFORMANCE CHARACTERISTICS		Remarks / Exceptions
3.1.2.4	Reflective stripes. A minimum eight (8) inch horizontal band of high gloss white paint or white reflective tape (Retroreflective, ASTM-D 4956-09, *Standard Specification for Retroreflective Sheeting for Traffic Control*, TYPE III & above) must be applied around the vehicle's surface.	
3.1.2.5	Lettering. The manufacturer will apply the airport's 'Name' and 'Insignia' (if available) in a contrasting color or by decal on both sides of the vehicle in long radius elliptical arches above and below the lettering center line. The size of the lettering will be a minimum of 2 ½-inches to a maximum of 6-inches. Reflective lettering is allowed if the material is the same as that which is used for the reflective stripe (as specified in AC 150/5210-5).	
3.1.3	Vehicle identification plate. A permanently marked identification plate will be securely mounted at the driver's compartment. The identification plate will contain the following information:	
	a. NOMENCLATURE	
	b. MANUFACTURER'S MAKE AND MODEL	
	c. MANUFACTURER'S SERIAL NUMBER	
	d. VEHICLE CURB WEIGHT: kg (pounds)	
	e. PAYLOAD, MAXIMUM: kg (pounds)	
	f. GROSS VEHICLE WEIGHT (GVW): kg (pounds)	
	g. FUEL CAPACITY AND TYPE: gals (gallons)	
	h. DATE OF DELIVERY (month and year)	
	I. WARRANTY (months and km (miles))	
	J. CONTRACT NUMBER	
	k. PAINT COLOR AND NUMBER	
	A second permanently marked information data plate will be securely mounted on the interior of the driver's compartment. The plate will contain the information required by NFPA 414, Standard for Aircraft Rescue and Fire Fighting Vehicles (2007 Edition), Section 1.3.5 Vehicle Information Data Plate. A single plate that combines or contains the information required for both plates is acceptable.	

3. VEHICLE CONFORMANCE/PERFORMANCE CHARACTERISTICS		Remarks / Exceptions
3.1.4	Environmental conditions.	
3.1.4.1	Vehicle operation and storage temperature conditions will vary with geographical location. Thus, the locality temperature range can go from -40° to 110°F. Refer to NFPA 414 for vehicle winterization criteria.	
3.1.4.2	Extreme temperature range. The vehicle will be capable of satisfactory storage and operation in temperatures ranging from -40° to 110°F. The vehicle will be equipped with a cab, chassis, and agent winterization system, permitting operation at -40°F. The winterization system will not detract from the performance of the vehicle or the firefighting system in ambient temperatures up to 110°F. The vehicle chassis winterization system will maintain the engine coolant, lubricants, fuel, and electrical systems operational at ambient temperatures of -40°F. The vehicle agent winterization system will provide sufficient insulation and heating capacity, by means of hot circulating liquids and/or forced air heat exchangers, to permit satisfactory operation of the vehicle and firefighting systems for a 2-hour period at ambient temperatures as low as -40° F with the vehicle fully operational and the engine running. At the end of this 2-hour period, the vehicle will be capable of successfully discharging its agents. All compartments not winterized will be marked as such on the interior of the compartment. The marking will state that the compartment is not winterized and cannot be used for the storage of items capable of freezing.	
3.1.5	Reduction of potential foreign object damage. All loose metal parts, such as pins, will be securely attached to the vehicle with wire ropes or chains. Removable exterior access panels, if provided, will be attached with captive fasteners.	
3.1.6	Vehicle Mobility.	
3.1.6.1	Operating terrain. The vehicle will be capable of operating safely on paved roads, graded gravel roads, cross country terrain, and sandy soil environments. Cross country terrain consists of open fields, broken ground, and uneven terrain. An off-road, high-mobility suspension system resulting in no more than 0.5 G_{rms} acceleration at the driver's seat of the vehicle when traversing an 8-inch (20 cm) diameter half round at 35 mph (56 kph) must be provided. The suspension design by which the manufacturer meets the suspension performance requirements is at the manufacturer's discretion.	
3.1.6.2	Gradeability. The fully loaded vehicle will be able to ascend any paved slope up to and including 50-percent.	
3.1.6.3	Side slope stability. The fully loaded vehicle will be stable on a 30° side slope when tested in accordance with NFPA 414.	

3. VEHICLE CONFORMANCE/PERFORMANCE CHARACTERISTICS		Remarks / Exceptions
3.1.6.4	Cornering stability. The fully loaded vehicle will be stable in accordance with NFPA 414 when tested in accordance with NFPA 414.	
3.2	Weights and dimensions.	
3.2.1	Overall dimensions. The maximum dimensions listed below are desirable to ensure vehicles can be accommodated in existing fire stations. Likewise, the overall dimensions should be held to a minimum that is consistent with the best operational performance of the vehicle and the design concepts needed to achieve this performance and to provide maximum maneuverability in accordance with NFPA 414. **Vehicle Capacity /Dimensions** — **1500 Gallon** Length (inches/cm) 433/1100 Width (inches/cm, excluding mirrors) 124/315 Height (inches/cm) 154/391 **NOTE:** *For Airport Operator Validation: Consult AC 150/5210-15, Aircraft Rescue and Fire Fighting Station Building Design, Appendix A, to ensure vehicles measurements do not exceed existing fire station dimensions.* **VEHICLE MEASUREMENT VALIDATION** Not applicable. **ADO/FAA Approval: _____**	
3.2.2	Angles of approach and departure. The fully loaded vehicle will have angles of approach and departure of not less than 30°.	
3.2.3	Field of vision. The vehicle will have a field of vision in accordance with NFPA 414.	

3. VEHICLE CONFORMANCE/PERFORMANCE CHARACTERISTICS		Remarks / Exceptions
3.2.3.1	Mirrors. Combination flat and convex outside rearview mirrors will be installed on each side of the cab. The flat mirrors will be of the motorized remote control type, providing not less than 60° horizontal rotational viewing range. The flat mirrors will also have electrically heated heads. Mirror remote and heating controls will be located on the instrument panel within reach of the seated driver. To provide the driver a clear view of the area ahead of the vehicle and to eliminate potential blind spots, a rectangular mirror will be installed on the lower corner of each side of the windshield, having a minimum area of 35 square inches. The vehicle will have a back-up (rear-view) camera with a display monitor mounted above the driver in the cab. Cameras and monitors that are designed to replace the function of the side-view mirrors are not an approved option in this specification.	
3.3	Chassis and vehicle components.	
3.3.1	Engine. The vehicle will have a turbocharged diesel engine that is certified to comply with the Environmental Protection Agency (EPA) and state laws for off-highway emission requirements at the time of manufacture. The engine and transmission must operate efficiently and without detrimental effect to any drive train components when lubricated with standard, commercially available lubricants according to the recommendations of the engine and transmission manufacturers.	
3.3.1.1	Acceleration. The fully loaded vehicle will accelerate from 0 to 50 miles per hour (mph) on a level paved road within: 25 seconds.	
3.3.1.2	Maximum speed. The fully loaded vehicle will attain a minimum top speed of 70 mph on a level, paved road.	
3.3.1.3	Pump and roll on a 40-percent grade. The fully loaded vehicle will be capable of pump and roll operations on a paved, dry, 40-percent grade in accordance with NFPA 414.	
3.3.1.4	Altitude. Where justified, the vehicle, including the pumping system, will be designed for operation at 2,000 feet above sea level. **JUSTIFICATION** **ADO/FAA Approval: _____**	

3. VEHICLE CONFORMANCE/PERFORMANCE CHARACTERISTICS		Remarks / Exceptions
3.3.2	Engine cooling system. The engine cooling system will be in accordance with NFPA 414. A label will be installed near the engine coolant reservoir reading "Engine Coolant Fill."	
3.3.3	Fuel system. The fuel system will be in accordance with NFPA 414.	
3.3.3.1	Fuel priming pump. The vehicle will be equipped with an electric or pneumatic fuel pump in addition to the mechanical fuel pump. The electric/pneumatic pump will be used as a priming pump capable of re-priming the engines fuel system.	
3.3.3.2	Fuel tank. The vehicle will have one or two fuel tanks with a minimum usable capacity in accordance with NFPA 414, as amended by NFPA 414. Each tank will have a fill opening of 3 inches minimum, readily accessible to personnel standing on the ground and designed to prevent fuel splash while refueling. Each tank will be located and mounted so as to provide maximum protection from damage, exhaust heat, and ground fires. If more than one tank is furnished, means will be provided to assure equalized fuel level in both tanks. An overturn fuel valve will be provided for each tank to prevent spillage in the event of a rollover. Each fuel tank must be prominently labeled "Diesel Fuel Only".	
3.3.4	Exhaust system. The exhaust system will be in accordance with NFPA 414. The exhaust system will be constructed of high grade rust resistant materials and protected from damage resulting from travel over rough terrain. The muffler(s) will be constructed of aluminized steel or stainless steel. Exhaust system outlet(s) will be directed upward or to the rear, away from personnel accessing equipment compartments and the engine air intake, and will not be directed toward the ground.	
3.3.5	Transmission. A fully automatic transmission will be provided. The transmission will be in accordance with NFPA 414.	
3.3.6	Driveline. The vehicle driveline will be in accordance with NFPA 414. If the driveline is equipped with a differential locking control, a warning/caution label will be placed in view of the driver indicating the proper differential locking/un-locking procedures. The operator's manual will also include a similar warning/caution. All moving parts requiring routine lubrication must have a means of providing for such lubrication. There must be no pressure lubrication fittings where their normal use would damage grease seals or other parts.	
3.3.7	Axle capacity. Each axle will have a rated capacity, as established by the axle manufacturer, in accordance with NFPA 414.	

3. VEHICLE CONFORMANCE/PERFORMANCE CHARACTERISTICS		Remarks / Exceptions
3.3.8	Suspension. The suspension system will be in accordance with NFPA 414 and AC 150/5220-10, Guide Specification for Aircraft Rescue and Fire Fighting (ARFF) Vehicles.	
3.3.9	Tires and wheels. Tires and wheels will be in accordance with NFPA 414. The vehicle will be equipped with single tires and wheels at all wheel positions. The vehicle will be equipped with tubeless steel belted radial tires with non-directional on/off-road type tread mounted on disc wheel assemblies. Tire and wheel assemblies will be identical at all positions. Tires and wheels will be certified by the manufacturer for not less than 25 miles of continuous operation at 60 mph at the normal operational inflation pressure. A spare tire and wheel assembly will be provided; however, the spare tire and wheel assembly are not required to be mounted on the vehicle. Tires will be new. Retreads, recaps, or re-grooved tires will not be permitted. Tire bead locks, where justified, may be installed on all tires and rims. **JUSTIFICATION** **ADO/FAA Approval: _____**	
3.3.10	Towing Connections. The vehicle will be equipped with towing connections in accordance with NFPA 414. The vehicle will be designed for flat towing; the capability to lift and tow the vehicle is not required. The tow connections may intrude into the 30 degree approach angle.	
3.3.11	Brake system. The vehicle will be equipped with a multi-channel all-wheel anti lock brake system with at least one channel for each axle. The brakes will be automatic, self-adjusting and fully air-actuated. Brakes will be in accordance with CFR 49 CFR 393.40 through 393.42(b)), 393.43, and 393.43 through 393.52. The braking system, complete with all necessary components will include:	
	a. Air compressor having a capacity of not less than 16 standard cubic feet per minute (SCFM).	
	b. Air storage reservoir(s), each tank equipped with drain (bleed) valves, and with safety and check valves between the compressor and the reservoir tank.	

3. VEHICLE CONFORMANCE/PERFORMANCE CHARACTERISTICS		Remarks / Exceptions
3.3.11	c. Automatic moisture ejector on each air storage reservoir. Manual air tank drains are acceptable if they are labeled, are centrally located in one compartment and are accessible by an individual standing at the side of the vehicle.	
	d. Automatic slack adjusters on cam brakes or internal self-adjusting brakes on wedge brakes on all axles.	
	e. Spring set parking brakes.	
	All components of the braking system will be installed in such a manner as to provide adequate road clearance when traveling over uneven or rough terrain, including objects liable to strike and cause damage to the brake system components. No part of the braking system will extend below the bottom of wheel rims, to ensure, in case of a flat tire, that the weight of the vehicle will be supported by the rim and the flat tire and not be imposed on any component of the braking system. Slack adjusters and air chambers will be located above the bottom edge of the axle carrier.	
3.3.11.1	Air dryer. A replaceable cartridge desiccant air dryer will be installed in the air brake system. The dryer will have the capability of removing not less than 95 percent of the moisture in the air being dried. The dryer will have a filter to screen out oil and solid contaminants. The dryer will have an automatic self-cleaning cycle and a thermostatically controlled heater to prevent icing of the purge valve.	
3.3.11.2	Compressed air shoreline or vehicle-mounted auxiliary air compressor. A flush mounted, check valved, auto-eject compressed air shoreline connection will be provided to maintain brake system pressure while the vehicle is not running. The shoreline will be flush mounted (not to extend outside the body line), located on the exterior of the vehicle, either on the left side rear corner of the cab, or at the rear of the vehicle. In lieu of a compressed air shoreline connection, the vehicle may be equipped with a 110 volt shoreline connected vehicle-mounted auxiliary air compressor. In lieu of a compressed air shoreline connection, the vehicle may be equipped with an electrical shoreline connected vehicle mounted auxiliary air compressor.	
3.3.12	Steering. The vehicle will be equipped with power steering. Rear-wheel steering technology is not an approved vehicle option.	
3.3.12.1	Steering effort. The steering system performance will be in accordance with NFPA 414.	

3. VEHICLE CONFORMANCE/PERFORMANCE CHARACTERISTICS		Remarks / Exceptions
3.3.12.2	Turning diameter. The fully loaded vehicle will have a wall to wall turning diameter of less than three times the overall length of the vehicle in both directions in accordance with NFPA 414.	
3.3.13	License plate bracket. A lighted license plate bracket will be provided at the left rear and left front of the vehicle. The location of the left front bracket will be placed so as not to interfere with the operation of fire fighting systems.	
3.4	Cab. The vehicle will have a fully enclosed two door cab of materials which are corrosion resistant, such as aluminum, stainless steel, or glass reinforced polyester construction. Steps and handrails will be provided for all crew doors, and at least one grab handle will be provided for each crew member, located inside the cab for use while the vehicle is in motion. The lowermost step(s) will be no more than 22 inches above level ground when the vehicle is fully loaded. A tilt and telescoping steering column will be provided.	
3.4.1	Windshield and windows. The windshield and windows will be of tinted safety glass. Each door window will be capable of being opened far enough to facilitate emergency occupant escape in the event of a vehicle accident The vehicle windows will have an electric control system.	
3.4.2	Cab interior sound level. The maximum cab interior sound level will be in accordance with NFPA 414.	
3.4.3	Instruments and controls. All instruments and controls will be illuminated and designed to prevent or produce windshield glare. Gauges will be provided for oil pressure, coolant temperature, and automatic transmission temperature. In addition to the instruments and controls required by NFPA 414, the following will be provided within convenient reach of the seated driver:	
	a. Master warning light control switch,	
	b. Work light switch(es), and	
	c. Compartment "Door Open" warning light and intermittent alarm that sounds when a compartment door is open and the parking brakes are released or the transmission is in any position other than neutral.	
3.4.4	Windshield deluge system. The vehicle will be equipped with a powered windshield deluge system. The deluge system will be supplied from the agent water tank and will have an independent pumping system. The deluge system activation switch will be located within reach of the seated driver and turret operator.	

<table>
<tr><th colspan="2">3. VEHICLE CONFORMANCE/PERFORMANCE CHARACTERISTICS</th><th>Remarks / Exceptions</th></tr>
<tr><td>3.4.5</td><td>Forward Looking Infrared (FLIR). A forward looking infrared (FLIR) camera and in-cab monitor, meeting the requirements of NFPA 414, will be provided. In addition, the FLIR monitor described in NFPA 414 will have a minimum dimension of 10 in (25 cm) (measured diagonally) and be located in a position where it is visible to both the seated driver and turret operator.</td><td></td></tr>
<tr><td>3.4.6</td><td>Climate control system. The offeror/contractor's standard heater/defroster and air conditioning system will be provided. The climate control system will induct at least 60 cubic feet per minute of fresh air into the cab. Cab mounted components will be protected from inadvertent damage by personnel.</td><td></td></tr>
<tr><td>3.4.7</td><td>Seats. The driver seat will be adjustable fore and aft and for height. The turret operator's seat, located to the right front of the driver's seat, will be a fixed (non-suspension) type. Each seat will be provided with a Type 3 seat belt assembly (i.e., 3-point retractable restraint) in accordance with CFR 49 CFR 571.209. Seat belts must be of sufficient length to accommodate crew members in full Personal Protective Equipment (PPE).</td><td></td></tr>
<tr><td>3.4.7.1</td><td>Seat Options. Two types of seat options are allowed in the vehicle. A standard seat contains a hard/fixed back. For these seats, a remote-mounted bracket designed to store a Self- Contained Breathing Apparatus (SCBA) will be provided. The remote-mounted bracket for the driver and turret operator (at a minimum) must be placed inside the cab. The brackets for seat positions #3 and #4 may be placed outside of the cab if necessary. An SCBA seat, on the other hand, contains an opening which can accommodate someone wearing an SCBA. The chart below represents the user's stated preference for the vehicle seating configuration.
<table>
<tr><th>Position</th><th>Standard</th><th>SCBA-Set</th><th>N/A</th></tr>
<tr><td>Driver</td><td>X</td><td></td><td></td></tr>
<tr><td>Turret</td><td></td><td>X</td><td></td></tr>
<tr><td>#3</td><td></td><td>X</td><td></td></tr>
<tr><td>#4</td><td></td><td></td><td>X</td></tr>
</table>
JUSTIFICATION
Need two ARFF personnel to use pre-connected hose, while driver operates turret or pump panel, need two ARFF personnel to effectively do a rescue while the driver keeps the exit path open with turret, also to take additional ARFF personnel to scene.

ADO/FAA Approval: _____</td><td></td></tr>
</table>

3. VEHICLE CONFORMANCE/PERFORMANCE CHARACTERISTICS		Remarks / Exceptions
3.4.8	Windshield wipers and washer. The vehicle will be equipped with electrically powered windshield wipers. The wiper arms and blades will be of sufficient length to clear the windshield area described by SAE J198, Windshield Wiper Systems - Trucks. Individual wiper controls will include a minimum of two speed settings and an intermittent setting. The wiper blades will automatically return to a park position, out of the line of vision. The vehicle will be equipped with a powered windshield washer system, including an electric fluid pump, a minimum one gallon fluid container, washer nozzles mounted to the wiper arms (wet arms), and a momentary switch.	
3.4.9	Warning signs. Signs that state "Occupants must be seated and wearing a seat belt when apparatus is in motion" will be provided in locations that are visible from each seated position in accordance with NFPA 414."	
3.4.10	Lateral accelerometer and/or stability control system. The vehicle will be equipped with a lateral accelerometer and/or an electronic stability control system in accordance with NFPA 414.	
3.4.11	Monitoring and Data Acquisition System (MADAS). The vehicle will be equipped with a MADAS as prescribed by NFPA 414.	
3.5	Body, compartments, and equipment mounting.	
3.5.1	Body. The vehicle will have a corrosion-resistant body.	
3.5.2	Compartments. The vehicle body will have lighted compartments in accordance with NFPA 414 with a minimum of 10 cubic feet of enclosed storage space.	
3.5.2.1	Compartment doors. Storage compartments will have clear anodized aluminum, counterbalanced, non-locking, roll-up or single hinged doors as determined by the manufacturer. Door latch handles on roll-up doors will be full-width bar type. Door straps will be provided to assist in closing the compartment doors when the rolled up or hinged door height exceeds six feet above the ground.	
3.5.2.2	Scuffplates. Replaceable scuffplates will be provided at each compartment threshold to prevent body damage from sliding equipment in and out of the compartments. The scuffplates will be securely attached to the compartment threshold but will be easily replaceable in the event of damage.	
3.5.2.3	Drip rails. Drip rails will be provided over each compartment door.	

3. VEHICLE CONFORMANCE/PERFORMANCE CHARACTERISTICS		Remarks / Exceptions
3.5.2.4	Shelves. An adjustable and removable compartment shelf will be provided for every 18 inches of each vertical storage compartment door opening. Shelving adjustments will require no more than common hand tools, and will not require disassembly of fasteners. Shelves will support a minimum of 200 pounds without permanent deformation. Each shelf will be accessible to crew members standing on the ground or using a pull out and tip-down configuration. Each shelf will have drain holes located so as to allow for drainage of any water from the stowed equipment.	
3.5.2.5	Drainage mats. Each compartment floor and shelf will be covered with a removable black mat designed to allow for drainage of any water from the stowed equipment.	
3.5.3	SCBA storage tubes. A single compartment or tubes for storage of four SCBA bottles will be provided. If tubes are provided, two will be installed on each side of the vehicle. The tubes will be of sufficient size to accommodate the procuring agencies SCBA cylinders.	
3.5.4	Ladder, handrails, and walkways. Ladder, stepping, standing, and walking surfaces will be in accordance with NFPA 414. Handrails will be provided in accordance with NFPA 414. The lowermost step(s) or ladder rungs will be no more than 22 inches (56 cm) above level ground when the vehicle is fully loaded. The lowermost steps may extend below the angle of approach or departure or ground clearance limits if they are designed to swing clear. The tread of the bottom steps must be at least 8 inches (20 cm) in width and succeeding steps at least 16 inches (40 cm) in width. The full width of all steps must have at least 6 inches (15 cm) of unobstructed toe room or depth when measured from, and perpendicular to, the front edge of the weight-bearing surface of the step.	
3.5.5	Ancillary equipment. Ancillary equipment listed in NFPA 414 A.4.2.1 (1)-(17) is not covered by this Procurement Specification in accordance with AC 150/5220-10, Guide Specification for Aircraft Rescue and Fire Fighting (ARFF) Vehicles. Ancillary equipment is funded separately by other sources. **NOTE**: Equipment funding will be obtained as a separate contract under the provisions of AC 150/5210-14, Aircraft Rescue and Fire Fighting Equipment, Tools, and Clothing.	

3. VEHICLE CONFORMANCE/PERFORMANCE CHARACTERISTICS		Remarks / Exceptions
3.6	Agent system.	
3.6.1	Agent (tire) pump. The vehicle will be equipped with a centrifugal pump capable of providing the performance specified herein as prescribed by NFPA 414.	
3.6.1.1	Agent system piping. All piping, couplings, and valves and associated components that come into contact with the agent will be in accordance with NFPA 414.	
3.6.1.2	Tank to pump connection. A check valve and shutoff valve will be provided in each tank to pump line.	
3.6.1.3	Piping, couplings, and valves. All agent system piping will conform to NFPA 414 criteria.	
3.6.1.4	Overheat protection. The agent system will be equipped with an overheat protection system in accordance with NFPA 414. Overheat protection is not required on vehicles utilizing a pre-mixed pressurized foam system.	
3.6.1.5	Pressure relief valves. The agent system will be equipped with pressure relief valves in accordance with NFPA 414.	
3.6.1.6	Drains. The agent system will be equipped with a drainage system in accordance with NFPA 414.	
3.6.2	Water tank. The vehicle will have a water tank with a manufacturer certified minimum capacity of at least 1500 gallons.	
3.6.2.1	Water tank construction. The water tank will be constructed of passivated stainless steel, polypropylene, or Glass Reinforced Polyester (GRP) construction. All materials used will be capable of storing water, foam concentrate, and water/AFFF solutions.	
3.6.2.2	Water tank overhead fill cover and drain. The water tank will be equipped with a 20 inch fill tower. The tower will be designed to allow for video inspection of the water tank interior. The water tank will incorporate a drainage system in accordance with NFPA 414.	
3.6.2.3	Water tank overflow system and venting. The water tank will incorporate a venting system to relieve pressure on the tank during fill and discharge operations at maximum flow rates. It will have an overflow system to relieve excess fluid in the event of tank overfill. Drainage from the vent and overflow system will not flow over body panels or other vehicle components and will not be in the track of any of the tires. Tank vent hoses will be of the non-collapsible type.	

3. VEHICLE CONFORMANCE/PERFORMANCE CHARACTERISTICS		Remarks / Exceptions
3.6.2.4	Water tank top fill opening. A top fill opening of not less than 8 inches internal diameter with a readily removable ¼-inch mesh strainer will be provided. The fill opening may be incorporated as part of the manhole cover, and will be sized to accommodate a 2½-inch fill hose.	
3.6.2.5	Water tank fill connections. The water tank will incorporate National Hose thread connections and will be in accordance with NFPA 414. If the vehicle is fitted with the "structural fire fighting capability option," the additional requirements listed in paragraph 3.6.8 must be incorporated.	
3.6.3	Foam system. (**NOTE**: *The requirements of section 3.6.3 do not apply to pre-mixed pressurized foam systems.*)	
3.6.3.1	Foam concentrate tank. The foam concentrate tank(s) will have a manufacturer certified working capacity sufficient for two tanks of water at the maximum tolerance specified in NFPA 412, Standard for Evaluating Aircraft Rescue and Fire-Fighting Foam Equipment for 3 to 6 percent foam concentrate (i.e., 7.0-percent).	
3.6.3.1.1	Foam tank construction. The foam tank will be constructed of passivated stainless steel, polypropylene, or GRP construction. All materials used will be capable of storing foam concentrate.	
3.6.3.1.2	Foam tank drain. The foam tank will incorporate a drain and drain valve. The valve will be on the left side of the vehicle and controlled by a crew member standing on the ground. The drain line will have a minimum 1½-inch I.D. The foam tank drain outlet will be located so that the contents of the tank can be drained into 5-gallon cans and 55-gallon drums.	
3.6.3.1.3	Foam tank top fill trough. The foam tank will incorporate a top fill trough mounted in the top of the tank readily accessible to at least two crew members on top of the vehicle. The top fill trough will incorporate a cover, latch, and sealed so as to prevent spillage under any operating condition. The top fill trough will be designed to allow two standard 5-gallon foam concentrate containers to be emptied simultaneously. The top fill trough neck will extend sufficiently close to the bottom of the tank to reduce foaming to a minimum during the fill operation. The top fill trough will incorporate readily removable, rigidly constructed 10 mesh stainless steel, brass or polyethylene strainers. All components in and around the top fill trough will be constructed of materials that resist all forms of deterioration that could be caused by the foam concentrate or water.	

3. VEHICLE CONFORMANCE/PERFORMANCE CHARACTERISTICS		Remarks / Exceptions
3.6.3.2	Foam tank fill connections. The foam tank will incorporate a 1.5-inch National Hose thread female hose connection on both sides of the vehicle to permit filling by an external transfer hose at flow rates up to 25-gpm. The connections will be provided with chained-on long handled plugs or rocker lug plugs. The top of the connections will be no higher than 48 inches above the ground and readily accessible. The fill lines will incorporate check valves and readily removable, rigidly constructed ¼-inch mesh strainers. All components in the foam tank fill system will be constructed of materials that resist all forms of deterioration that could be caused by the foam concentrate or water.	
3.6.3.2.1	Foam tank vent and overflow system. The foam tank will incorporate a vent system to relieve pressure on the tank during fill and discharge operations at maximum flow rates and an overflow system to relieve excess liquid in the event of tank overfill. Drainage from the vent and overflow system will not flow over body panels or other vehicle components and will not be in front of or behind any of the tires. Tank vent hoses will be of the non-collapsible type.	
3.6.3.3	Foam transfer pump. A foam transfer pump will be provided and mounted in a compartment on the vehicle. The pump will be capable of transferring and drawing foam liquid concentrate at adjustable flow rates up to 25-gpm directly through the pump and loading connections (see 3.6.3.2). All materials and components that come in contact with the foam will be compatible with the foam concentrate. The pump and its plumbing will have provisions for flushing with water from the water tank. A suitable length of hose with appropriate connections will be provided for filling the foam tank from an external foam storage container.	
3.6.3.4	Foam flushing system. The foam concentrate system will be designed in accordance with NFPA 414 so that the system can be readily flushed with clear water.	
3.6.3.5	Foam concentrate piping. All metallic surfaces of the piping and associated components that come into contact with the foam concentrate will be of brass, bronze, or passivated stainless steel. The foam concentrate piping will be in accordance with NFPA 414.	

3. VEHICLE CONFORMANCE/PERFORMANCE CHARACTERISTICS		Remarks / Exceptions
3.6.4	Foam proportioning system. The vehicle will have a foam proportioning system for Aqueous Film-Forming Foam (AFFF) (whether 3- or 6-percent foam concentrate) in accordance with NFPA 414. If a fixed orifice plate system is used, a plate will be provided for each percentage foam concentrate; the additional plate will be securely mounted in a protected location on the vehicle. A fire vehicle mechanic will be able to interchange the plates using common hand tools.	
3.6.5	Primary vehicle turret. The vehicle will be equipped with a standard roof-mounted turret, high reach extendable turret, and/or high flow bumper mounted turret to serve as the primary source of agent delivery, as specified below:	
3.6.5.1	Roof turret. The roof turret will be mounted near the front of the roof of the vehicle. It will have a non-air-aspirating, constant flow, variable stream nozzle with dual flow rates for foam or water rated as specified in NFPA 414. The discharge pattern will be infinitely variable from straight stream to fully dispersed. The roof turret will be power operated; power controls will be positioned for use by the driver and the crew member seated to the right of the driver. The type of nozzle or turret drain will be per the manufacturer's recommendation.	
3.6.6	Bumper turret. The vehicle will be equipped with a joystick controlled, constant flow, non-air-aspirating, variable stream type: low angle high volume dual rate (minimum 375/750 GPM) bumper turret. The bumper turret will be capable of discharging at a minimum flow rates of foam or water as specified by the user, with a pattern infinitely variable from straight stream to fully dispersed. The bumper turret will be capable of automatic oscillation, with the range of oscillation adjustable up to 90° each side of center (left and right) with vertical travel capabilities of +45°/-20° meeting section 4.20.2 in NFPA 414.	
3.6.7	Preconnected handline(s). Two 200 foot, 1¾-inch pre-connected woven jacket handline(s), with a 1½-inch control valve and a pistol grip nozzle, will be located on (or accessible from) each side of the vehicle. A safety system will be provided to prevent charging of the hose until the hose has been fully deployed. The handline(s) and nozzle(s) will be in accordance with NFPA 414, and will allow for a minimum of 95 gpm at 100 psi nozzle pressure. A control for charging each handline will be provided for operation by both the driver and the turret operator.	
3.6.7.1	In addition, the vehicle will be equipped with the following handline: 100 feet of twinned 1-inch dry chemical/foam-water hose on a reel.	

3. VEHICLE CONFORMANCE/PERFORMANCE CHARACTERISTICS		Remarks / Exceptions
3.6.8.	Structural fire fighting capability. The vehicle will be equipped with an agent system structural control panel, on the left side of the vehicle, operable while standing on the ground. Structural panel activation will be interlocked to operate only with the vehicle parking brakes set and the transmission in neutral position. Controls and instruments will be grouped by function. The control panel will be hinged or accessible from the rear for maintenance. Instruments will be lighted for night operation.	
3.6.8.1	The structural panel will include, as a minimum, the following:	
	a. Panel activation switch, including the panel lights.	
	b. Engine tachometer.	
	c. Engine oil pressure gauge with low pressure warning light.	
	d. Engine coolant temperature gauge with high temperature warning light.	
	e. A liquid filled gauge, or digital indicator for pump suction, -30 inches Hg vacuum to 600 psi.	
	f. A liquid filled gauge, or digital indicator for pump pressure, 0 to 600 psi.	
	g. An adjustable pump pressure using either an electronic pressure governor or manual control with a relief valve will be provided.	
	h. Foam or water selection.	
	I. Water and foam tank liquid level indicators, located adjacent to the water and foam tank fills.	
3.6.8.2	The structural fire fighting capability will also require installation of the following items:	
	a. A priming pump and control (for drafting using the large intake connection).	
	b. Water tank isolation valve.	
	c. Discharge connections. Two 2½-inch discharge connections with male National Hose threads will be provided. One 2½-inch discharge will be provided on each side of the vehicle. Each connection will be equipped with a cap, a quarter-turn control valve, a bleeder valve, and a pressure gauge. Each connection will be rated at 250-gpm minimum.	

3. VEHICLE CONFORMANCE/PERFORMANCE CHARACTERISTICS		Remarks / Exceptions
3.6.8.2	d. Intake connections. The vehicle will be equipped with one valved 4 ½-inch intake connection on the left side. The vehicle will be equipped with one valved 2 ½-inch intake connection on the left side adjacent to the 4 1/2-inch intake connection with both having either a 30° or 45° turn-down fitting. The 4 ½-inch intake connection will have male National Hose threads, a quarter-turn control valve, a bleeder valve, a strainer, and a cap. The 2 ½-inch intake connection will have rocker lug female National Hose threads, a quarter-turn control valve, a bleeder valve, a strainer, and a plug. The vehicle will be capable of filling its water tank by pumping from a draft, a hydrant, or a nurse truck through either of the intake connections without the use of a hose from a discharge connection to a tank fill connection.	
3.6.9	Primary turret discharge nozzle. The vehicle will be equipped with a combination dry chemical/AFFF nozzle of the entrainment type on the primary turret mounted on the front bumper.	
3.7	Dry chemical agent system. The vehicle will be equipped with a 450 lb minimum capacity potassium bicarbonate dry chemical auxiliary agent system. The propellant gas cylinder will be replaceable within fifteen minutes by two crew members standing on the ground and be equipped with a cylinder replacement hoisting system. The propellant gas cylinder will be secured to withstand off-road operations. A pressure indicator will be visible to any person opening the tank fill cap. Blow-down piping will be directed beneath the vehicle. The dry chemical agent tank will include lifting rings and will have a nameplate indicating, as a minimum, the following:	
	a. Extinguishing agent.	
	b. Capacity.	
	c. Weight full.	
	d. Weight empty.	
	e. Operating pressure.	
	f. Hydrostatic test date.	
	g. Type of agent required for re-servicing.	
3.7.1	Not applicable.	

3. VEHICLE CONFORMANCE/PERFORMANCE CHARACTERISTICS		Remarks / Exceptions
3.7.2	Dry chemical hose reel. A hose reel, equipped with at least 100 feet of dry chemical hose, will be mounted in a compartment. Handline agent and purge controls will be mounted in or adjacent to the compartment. All electrical components will be sealed against entry of water. The hose reel will have both electric and manual rewind provisions. The manual rewind handle will be bracket mounted and stored in the compartment. A quick acting control will be provided to activate the handline from the cab of the vehicle.	
3.8	Not applicable.	
3.9	Electrical systems and warning devices. The vehicle will have a 12-volt or 24-volt electrical and starting system in accordance with NFPA 414.	
3.9.1	Alternator. An appropriate charging system, in accordance with NFPA 414, will be provided. The minimum continuous electrical load will include operation of the air conditioning system.	
3.9.2	Batteries. Batteries will be of the maintenance-free type; addition of water will not be required during normal service life. The battery cover and vent system will be designed to prevent electrolyte loss during service and to keep the top of the battery free from electrolyte.	
3.9.2.1	Battery compartment. The batteries will be enclosed in a weatherproof enclosure, cover, or compartment and be readily accessible.	
3.9.3	Battery charger or conditioner. The vehicle will have a DC taper type battery charger or an automatic battery conditioner, or voltage monitoring system, providing a minimum 12 amp output. The charger/conditioner will be permanently mounted on the vehicle in a properly ventilated, accessible location. The charger/conditioner will be powered from the electrical shoreline receptacle (see 3.10.1). A charging indicator will be installed next to the receptacle. When a battery conditioner is provided, the conditioner will monitor the battery state of charge and, as necessary, automatically charge or maintain the batteries without gassing, depleting fluid level, overheating, or overcharging. A slave receptacle will be provided at the rear or on either side of the vehicle cab. Battery jump studs may be installed on the exterior of the battery box in lieu of a slave receptacle.	
3.9.4	Electromagnetic interference. The vehicle electrical system will be in accordance with SAE J551-2 for electromagnetic interference.	
3.9.5	Work lighting.	

3. VEHICLE CONFORMANCE/PERFORMANCE CHARACTERISTICS		Remarks / Exceptions
3.9.5.1	Cab interior lights. Cab interior light levels will be sufficient for reading maps or manuals. At least one red and one white cab interior dome light will be provided.	
3.9.5.2	Compartment lights. White lighting sufficient to provide an average minimum illumination of 1.0 footcandle will be provided in each compartment greater than 4.0 cubic feet and having an opening greater than 144 square inches. Where a shelf is provided, this illumination will be provided both above and below the shelf. All compartments will be provided with weatherproof lights that are switched to automatically illuminate when compartment doors are opened and the vehicle master switch is in the 'on' position. Light switches will be of the magnetic (non-mechanical) type.	
3.9.5.3	Ladder, step, walkway, and area lights. Non-glare white or amber lighting will be provided at ladders and access steps where personnel work or climb during night operations. In addition, ground lighting will be provided. Ground lights will be activated when the parking brake is set in accordance with AC 150/5220-10, Guide Specification for Aircraft Rescue and Fire Fighting (ARFF) Vehicles. These area lights will be controlled with three-way switches on the cab instrument panel and near the light sources. The switch located in the cab will be a master switch and must be turned on before auxiliary switches near the light sources are operational.	
3.9.5.4	Spot/Floodlights. Two spot/floodlights will be attached at the end of the primary turret or at the end of the HRET assembly. The lights will illuminate the area covered by the turret. Both lights will be controlled from switches in the cab. LED lights will be used.	
3.9.5.5	Flood Lights. Two telescoping floodlights will be provided. One light will be mounted on the left and right sides of the vehicle. 250W LED lights will be used. Both lights will be mounted on extension tubes and controlled from switches in the cab and manually raised. To prevent these lights from accidental damage, the cab will be equipped with a visual warning signal to alert the driver if the lights are inadvertently left in the "up" position.	

3. VEHICLE CONFORMANCE/PERFORMANCE CHARACTERISTICS		Remarks / Exceptions
3.9.5.6	Scene Lights. A total of six high mounted floodlights will be provided to illuminate the work areas around the vehicle. Two lights will be mounted on the front and two will be mounted on each side of the vehicle. The lights will be powered by the vehicle alternator driven system or auxiliary generator, and the lights in the front will be controlled from switches in the cab. LED lights will be used.	
3.9.6	Audible warning devices.	
3.9.6.1	Siren. The vehicle will be equipped with an electronic siren system. The amplifier unit will include volume control and selection of "Radio," "PA," "Manual," "Yelp," "Wail," and "Hi-Lo" (European) modes, and a magnetic noise canceling microphone. The amplifier, microphone, and controls will be within reach of the driver and the turret operator. Siren activating foot switches will be located in front of the driver and the turret operator. The siren speaker will be rated at 100 watts minimum and will be located in a guarded position as low and as far forward on the vehicle as practical.	
3.9.6.2	Horn. Dual forward facing air horns will be installed in protected locations near the front of the vehicle. Air horn activating foot switches will be located in front of the driver and the turret operator.	
3.9.7	Emergency warning lights. All emergency warning lights must meet the requirements of AC 150/5210-5. Where applicable, LED lights will be used as the primary light type. Lighting units will be installed on the top front, sides, and rear of the vehicle to provide 360° visibility. A switch will be provided on the instrument panel to control all of the top, side, front and rear emergency warning lights. A switch will also be provided on the instrument panel to disable all lower emergency warning lights when desired. All lighting systems will meet NFPA 414 emergency lighting criteria.	
3.9.7.1	Emergency warning light color. All emergency warning lights will meet the requirements of AC 150/5210-5.	
3.9.7.2	Headlight flashing system. A high beam, alternating/flashing, headlight system will be provided. The headlight flasher will be separately switched from the warning light panel. All emergency warning lights will meet the requirements of AC 150/5210-5.	

3. VEHICLE CONFORMANCE/PERFORMANCE CHARACTERISTICS		Remarks / Exceptions
3.9.8	Radio circuit. The vehicle will have three separate 30 amp circuits with breakers and connections provided in a space adjacent to the driver and turret operator for installation of radios and other communications equipment after the vehicle has been delivered. To facilitate the installation of the communications equipment the manufacturer will provide three antennas pre-installed on top of the cab. ***Radios are all airport responsibility and not part of this specification.***	
3.9.9	Power receptacles.	
3.9.9.1	Primary power receptacles. The vehicle will have two duplex 15-amp 110-volt power receptacles, one installed adjacent to the cab door on each side of the vehicle. Each duplex receptacle will include one straight blade and one twist-lock connection. These outlets will be powered by the generator.	
3.9.9.2	Auxiliary Dower receptacles. The vehicle will have 2-12-volt auxiliary power receptacles mounted adjacent to the driver and crew member positions, preferably in the instrument panel.	
3.9.9.3	Cable reel. The vehicle will be equipped with an electrical cable reel, located within a compartment. The reel will be equipped with 200 feet of 20 amp, 600 volt, 90°C insulated electrical cable. The electrical cable will be equipped with a rubber ball stop to prevent cable pull through during rewinding operations. A four-way roller guide will be provided on the cable reel to prevent chafing of cable insulation. The cable reel will have an electric rewind motor with provisions for manual rewind in the event of motor failure; the manual rewind handle will be securely stored near the cable reel. A portable weatherproof duplex outlet box, with built-in circuit breakers and twist-lock receptacles, will be provided for on the cable end. The cable reel will be powered by the auxiliary generator.	
3.9.10	Auxiliary generator. A minimum 10 kilowatt (kW) (continuous rating), 120/240-volt, 60 hertz, diesel, hydraulic, or split shaft Power Takeoff (PTO)-driven generator will be provided.	
3.10	Line voltage electrical system.	

3. VEHICLE CONFORMANCE/PERFORMANCE CHARACTERISTICS		Remarks / Exceptions
3.10.1	Electrical shoreline connection. The battery charger/conditioner will be powered from a covered, polarized, insulated, labeled, recessed (flush mounted), male, 110 volt AC auto-eject receptacle. The connection will be located on the exterior of the vehicle at the rear or on either side of the cab. A weatherproof charge meter will be installed next to the receptacle. A 15 amp rated, 110-120 volt, AC straight blade (non twist-lock) connector will be provided.	
3.11	Air systems.	
3.11.1	Air hose reel. An air hose reel will be provided in an enclosed compartment on the vehicle. The hose reel will be equipped with 200 feet of 3/8-inch I.D. hoseline. A 3/8 inch National Pipe Taper (NPT) fitting and female style quick disconnect will be connected to the end of the hoseline. A four-way roller guide will be provided for the hose reel to prevent hose chafing and kinking. The hoseline will be equipped with a rubber ball stop to prevent hose pull through on roller guides during rewinding operations. The hose reel will have an electric rewind motor and provisions for manual rewind in the event of motor failure; the manual rewind handle will be securely stored near the hose reel. A pressure protected air supply from the chassis air system will be connected to the hose reel. The air supply lines will be routed with minimum bends and located or guarded from damage from the carried equipment.	
3.12	Quality of Workmanship. The vehicle, including all parts and accessories, will be fabricated in a thoroughly workmanlike manner. Particular attention will be given to freedom from blemishes, burrs, defects, and sharp edges; accuracy of dimensions, radii of fillets, and marking of parts and assemblies; thoroughness of welding, brazing, soldering, riveting, and painting; alignment of parts; tightness of fasteners; et cetera. The vehicle will be thoroughly cleaned of all foreign matter.	

4. REGULATORY REQUIREMENTS.		Remarks / Exceptions
4.1	Recoverable Materials. The contractor is encouraged to use recovered materials to the maximum extent practicable, in accordance with Title 48: Federal Acquisition Regulations System, Part 2823- Environment, Conservation, Occupational Safety, and Drug-free Workplace, Subpart 2823.4 Use of Recovered Material, 403 Policy and 404 Procedures.	
4.2	Green Procurement Program. Green Procurement Program (GPP) is a mandatory federal acquisition program that focuses on the purchase and use of environmentally preferable products and services. GPP requirements apply to all acquisitions using appropriated funds, including services and new requirements. FAR 23.404(b) applies and states the GPP requires 100% of EPA designated product purchase that are included in the Comprehensive Procurement Guidelines list that contains recovered materials, unless the item cannot be acquired:	
	a. competitively within a reasonable timeframe;	
	b. meet appropriate performance standards, or	
	c. at a reasonable price.	
	The prime contractor is responsible for ensuring that all subcontractors comply with this requirement. Information on the GPP can be found at: http://www.dot.gov/ost/m60/DOT_policy_letters/apl8_04.pdf or FAR 23.404(b): http://www.acquisition.gov/far/current/html/Subpart%2023_4.html	

5. PRODUCT CONFORMANCE PROVISIONS.		Remarks / Exceptions
5.1	Classification of inspections. The inspection requirements specified herein are classified as follows:	
	a. Performance inspection (see 5.2).	
	b. Conformance inspection (see 5.3).	
5.2	Performance inspection. The vehicle will be subjected to the examinations and tests described in 5.6.3.1 through 5.6.3.5 (if applicable). The contractor will provide or arrange for all test equipment, personnel, schedule, and facilities.	
5.3	Conformance inspection. The vehicle will be subjected to the examinations and tests described in 5.6.3.1 through 5.6.3.5 (if applicable). The contractor will provide or arrange for all test equipment, personnel, and facilities.	
5.4	Product conformance. The products provided will meet the performance characteristics of this PS, conform to the producer's own drawings, specifications, standards, and quality assurance practices, and be the same product offered for sale in the commercial marketplace. The purchaser reserves the right to require proof of such conformance.	
5.5	Technical proposal. The offeror/contractor will provide an itemized technical proposal that describes how the proposed model complies with each characteristic of this PS; a paragraph by paragraph response to the characteristics section of this PS will be provided. The offeror/contractor will provide two copies of their commercial descriptive catalogs with their offer as supporting reference to the itemized technical proposal. The offeror/contractor will identify all modifications made to their commercial model in order to comply with the requirements herein. The vehicle furnished will comply with the "commercial item" definition of FAR 2.101 as of the date of award. The purchaser reserves the right to require the offeror/contractor to prove that their product complies with the referenced commerciality requirements and each conformance/performance characteristics of this PS.	
5.6	Inspection requirements.	
5.6.1	General inspection requirements. Apparatus used in conjunction with the inspections specified herein will be laboratory precision type, calibrated at proper intervals to ensure laboratory accuracy.	

5. PRODUCT CONFORMANCE PROVISIONS.		Remarks / Exceptions
5.6.2	Test rejection criteria. Throughout all tests specified herein, the vehicle will be closely observed for the following conditions, which will be cause for rejection:	
	a. Failure to conform to design or performance requirements specified herein or in the contractor's technical proposal.	
	b. Any spillage or leakage of any liquid, including fuel, coolant, lubricant, or hydraulic fluid, under any condition, except as allowed herein.	
	c. Structural failure of any component, including permanent deformation, or evidence of impending failure.	
	d. Evidence of excessive wear.	
	e. Interference between the vehicle components or between the vehicle, the ground, and all required obstacles, with the exception of normal contact by the tires.	
	f. Misalignment of components.	
	g. Evidence of undesirable roadability characteristics, including instability in handling during cornering, braking, and while traversing all required terrain.	
	h. Conditions that present a safety hazard to personnel during operation, servicing, or maintenance.	
	i. Overheating of the engine, transmission, or any other vehicle component.	
	J. Evidence of corrosion.	
	k. Failure of the fire fighting system and sub-systems.	
5.6.3	Detailed inspection requirements.	

5. PRODUCT CONFORMANCE PROVISIONS.		Remarks / Exceptions
5.6.3.1	Examination of product. All component manufacturers' certifications, as well as the prototype and production/operational vehicle testing outlined in Table 1, will be examined to verify compliance with the requirements herein. Attention will be given to materials, workmanship, dimensions, surface finishes, protective coatings and sealants and their application, welding, fastening, and markings. Proper operation of vehicle functions will be verified as defined by NFPA 414, Acceptance Criteria chapter. A copy of the vehicle manufacturer's certifications will be provided with each vehicle in accordance with NFPA 414. The airport may accept a manufacturer or third party certification for any/all prototype and production/operational vehicle testing performed prior to delivery which proves that the vehicle meets the performance parameters of NFPA 414.	

Table 1. Vehicle Test Data

NFPA 414 paragraph	**Test**
Production Vehicle Operational Tests (NFPA 414 - Section 6.4)	
(6.4.1)	Vehicle Testing, Side Slope
(6.4.2)	Weight / Weight Distribution
(6.4.3)	Acceleration. **NOTE:** *With the modification that the instrumentation must be a GPS-based electronic data collection system.*
(6.4.4)	Top Speed
(6.4.5)	Brake Operational Test
(6.4.6)	Air System / Air Compressor Test
(6.4.7)	Agent Discharge Pumping Test
(6.4.8)	Dual Pumping System Test (As Applicable)
(6.4.9)	Pump and Maneuver Test
(6.4.10)	Hydrostatic Pressure Test
(6.4.11)	Foam Concentration Test
(6.4.12)	Primary Turret Flow Rate Test
(6.4.13)	Piercing/Penetration Nozzle Testing (As Applicable)
Prototype Vehicle Tests (NFPA 414 - Section 6.3)	
(6.3.1)	Rated Water and Foam Tank Capacity Test
(6.3 2)	Cornering Stability. NOTE: *With the modification that the evasive maneuver/double-lane change test must be conducted at* 35 *mph* (56 *kph).*
(6.3.3)	Vehicle Dimensions
(6.3.4)	Driver Vision Measurement
(6.3.5)	Pump and Roll on a 40 Percent Grade

5.6.3.1		

NFPA 414 paragraph	Test
(6.3.6)	Electrical Charging System
(6.3.7)	Radio Suppression
(6.3.8)	Gradability Test
(6.3.9)	Body and Chassis Flexibility Test
(6.3.10)	Service/Emergency Brake Test
(6.3.11)	Service/Emergency Brake Grade Holding Test
(6.3.12)	Steering Control Test
(6.3.13)	Vehicle Clearance Circle Test
(6.3.14)	Agent Pump(s)/Tank Vent Discharge Test
(6.3.15)	Water Tank Fill and Overflow Test
(6.3.16)	Flushing System Test
(6.3.17)	Primary Turret Flow Rate Test
(6.3.18)	Primary Turret Pattern Test
(6.3.19)	Primary Turret Control Force Measurement
(6.3.20)	Primary Turret Articulation Test
(6.3.21)	Handline Nozzle Flow Rate Test
(6.3.22)	Handline Nozzle Pattern Test
(6.3.23)	Ground Sweep/Bumper Turret Flow Rate Test
(6.3.24)	Ground Sweep/Bumper Turret Pattern Control Test
(6.3.25)	Undertruck Nozzle Test
(6.3.26)	Foam Concentration/Foam Quality Test
(6.3.27)	Warning Siren Test
(6.3.28)	Propellant Gas
(6.3.29)	Pressure Regulation
(6.3.30)	AFFF Premix Piping and Valves
(6.3.31)	Pressurized Agent Purging and Venting
(6.3.32)	Complementary Agent Handline Flow Rate and Range
(6.3.33)	Dry Chemical Turret Flow Rate and Range
(6.3.34)	Cab Interior Noise Test

6. PACKAGING.		Remarks / Exceptions
6.1	Preservation, packing, and marking will be as specified in the Procurement Specification, contract or delivery order.	
6.2	The vehicle must be delivered with full operational quantities of lubricants, brake and hydraulic fluids, and cooling system fluid all of which must be suitable for use in the temperature range expected at the airport.	

6. PACKAGING.		Remarks / Exceptions
6.3	The vehicle must be delivered with one complete load of firefighting agents and propellants. One complete load is defined as all of the agents and propellants necessary for the vehicle to be fully operational. One load would include, at a minimum: one fill of a foam tank; one fill of a dry chemical tank (if applicable); one fill of a halogenated tank (if applicable); one spare nitrogen cylinder for a dry chemical system (if applicable); and one spare argon cylinder for a halogenated system (if applicable). Agents and propellants for required testing or training are not included. For the initial training period, water should be used in place of other extinguishing agents. The manufacturer may pre-ship agents and propellants to a receiving airport to reduce overall procurement costs.	
6.4	The vehicle manufacturer must provide initial adjustments to the vehicle for operational readiness and mount any ancillary appliances purchased through the vehicle manufacturer as part of the vehicle.	

7. TRAINING.		Remarks / Exceptions
7.1	Upon delivery of the vehicle to the airport, the manufacturer must, at no additional cost, provide the services of a qualified technician for five consecutive days (or up to 8 days for an high reach extendable turret) for training. This is considered sufficient time for the purchaser to adjust shift work schedules to get maximum employee attendance to training sessions at some point during the training period. During this time sufficient repetitive learning opportunities must be provided by the manufacturer to allow various shifts to complete the training requirements.	
7.2	The technician must provide thorough instruction in the use, operation, maintenance and testing of the vehicle. This setup must include operator training for the primary operators, which will give them sufficient knowledge to train other personnel in the functional use of all fire fighting and vehicle operating systems. Prior to leaving the vehicle, the technician should review the maintenance instructions with the purchaser's personnel to acquaint them with maintenance procedures as well as how to obtain support service for the vehicle.	
7.3	Training must include written operating instructions, electronic training aids (videos/power point), or other graphics that depict the step-by-step operation of the vehicle. Written instructions must include materials that can be used to train subsequent new operators.	

8. REFERENCED DOCUMENTS.		Remarks / Exceptions
8.1	Source of documents.	
8.1.1	The CFR may be obtained from the Superintendent of Documents, U.S. Government Printing Office, Washington DC 20402. Title 14, Code of Federal Regulations (CFR), Part 139, Certification of Airports (14 CFR Part 139) Section 139.315 Aircraft Rescue and Firefighting: Index Determination. Section 139.317 Aircraft Rescue and Firefighting: Equipment and Agents. Section 139.319 Aircraft Rescue and Firefighting: Operational Requirements. Title 49; Code of Federal Regulations (CFR), Part 393: Parts and Accessories Necessary for Safe Operation: Subpart C- Brakes. Title 49; Code of Federal Regulations (CFR), Part 571, Motor Carrier Vehicle Safety Standards, Part 209, Standard No. 209; Seat Belt Assemblies	
8.1.2	SAE documents may be obtained from SAE, Inc., 400 Commonwealth Drive, Warrendale PA 15096.	
8.1.3	National Fire Protection Association (NFPA): NFPA documents may be obtained from NFPA, Batterymarch Park, Quincy MA 02269-9101. NFPA 412, Standard for Evaluating Aircraft Rescue and Fire-Fighting Foam Equipment (2009 Edition) NFPA 414, Standard for Aircraft Rescue and Fire Fighting Vehicles (2007 Edition) NFPA 1901, Standard for Automotive Fire Apparatus (2009 Edition)	

8. REFERENCED DOCUMENTS.		Remarks / Exceptions
8.1.4	Federal Aviation Administration (FAA): FAA ACs may be obtained from the FAA website: http://www.faa.gov/regulations_policies/advisory_circulars/ AC 150/5220-10, Guide Specification for Aircraft Rescue and Fire Fighting (ARFF) Vehicles AC 150/5210-5, Painting, Marking, and Lighting of Vehicles Used on an Airport FAA Orders, Specifications, and Drawings may be obtained from: Federal Aviation Administration, ATO-W CM-NAS Documentation, Control Center, 800 Independence Avenue, SW, Washington, DC 20591. Telephone: (202) 548-5256, FAX: (202) 548-5501 and website: http://www.faa.gov/about/office_org/headquarters_offices/ato/service_units/techops/atc_facilities/cm/cm_documentation/	

ADDENDUM TO

FEDERAL AVIATION ADMINISTRATION
ADVISORY CIRCULAR 150/5220-10E

SECTION 3.4 - VEHICLE PROCUREMENT SPECIFICATION, CLASS 4, AIRCRAFT RESCUE FIREFIGHTING VEHICLE

This document shall serve to provide clarity of the specifications and modify the existing AC to better suit operations at Hagerstown Regional Airport.

ADDENDUM		Remarks / Exceptions
GENERAL All interior and exterior lighting shall be LED as applicable and allowed by Federal Regulations, NFPA, and FAA Advisory Circulars All discharge and intake connections shall be National Hose Thread and where applicable shall equipped with 4" Storz fittings and 30 degree elbows		
3.1.2.4	**Reflective Stripes - Clarification** A minimum eight (8) inch horizontal band of white reflective tape (Retroreflective, ASTM-D 4956-09, standard specification for retroreflective sheeting for traffic control, TYPE **III** & above) outlined with ¼" blue vinyl pin stripe must be applied around the vehicle's surface.	
3.2.1.5	**Lettering - Clarification** The numerals "35- 1" shall be affixed to the cab roof 24 inches high and on each side of the vehicle 16 inches high in a blue contrasting color. Lettering "Hagerstown Regional Airport ARFF" shall be in a contrasting color or by decal on both sides of the vehicle in long radius elliptical arches above and below the lettering center line. The size of the lettering will be a minimum of 2.5 inches to a maximum of 6 inches. Reflective lettering is allowed if the material is the same as that which is used for the reflective stripe (as specified in AC 150/5210-5).	
3.3.4	**Exhaust System - Additional** A vertical exhaust shall be supplied with a Plymovent adapter tip on the top of the exhaust. Final exhaust height to be determined at engineering meeting. **Justification** - The Plymovent system is designed to remove vehicle exhaust from the fire station through a track system installed in the fire station. In order for the exhaust from this vehicle to be removed, it will require a vertical exhaust with a Plymovent adapter tip installed.	
3.3.11.2	**Compressed air shoreline or vehicle mounted auxiliary compressor – Clarification** The air system shall be supplied with an on board auxiliary air compressor, 115 volt electric motor driven, to maintain the vehicle's air system at a working pressure between 80 to 100 psi. The compressor shall be wired through the vehicle shoreline connection.	
3.5.2.1	**Compartment Doors – Clarification** All compartment doors shall be roll-up type	
3.5.3	**SCBA Storage tubes** SCBA storage tubes shall be sized to accommodate Scott high pressure 45 minute bottles.	

ADDENDUM		Remarks / Exceptions
3.6.2.1	**Water Tank Construction - Clarification** Water tank construction shall be UV protected Polypropylene	
3.6.3.1.1	**Foam Tank Construction - Clarification** Foam tank construction shall be UV protected Polypropylene	
3.6.4	**Foam Proportioning System - Clarification** Foam proportioner shall be set for 3% AFFF foam concentrate	
3.6.7	**Preconnected handlines - Change** The nozzle shall NOT be equipped with a pistol grip	
3.6.8.1	**Structural Panel will include:**	
3.6.8.1(b)	Engine tachometer with hourmeter for pump operations - **(ADD)**	
3.6.8.1(e)	A Digital indicator for pump suction, -30 inches Hg vacuum to 600 **(Clarification)**	
3.6.8.1(f)	A Digital indicator for pump pressure 0 to 600 **(Clarification)**	
ADD 3.6.8.1(j)	Test connections for the pump pressure and suction gauges	
ADD 3.6.8.1(k)	A separate means other than the tachometer shall be provided that will allow for the manual checking of the pump engine speed.	
ADD 3.6.8.1(1)	An indicator light that warns the operator not to open the throttle unless the vehicle is safely engaged in pump mode.	
3.6.8.2(c)	**Discharge Connections - Additional** Each connection shall also be equipped with a 30 degree elbow	
3.6.8.2(d)	**Intake Connections - Additional** The 4-1/2" intake connection shall be equipped with a 30 degree 4-1 /2"NHT x 4" Storz fitting with blind cap and chain.	
3.7.2	**Dry Chemical Hose Reel- Clarification** The handline for dry chemical shall be a compartment mounted swing-out hose reel equipped with 100 ft. of one inch dual agent twinned type booster hose. This handline shall be provided on the right side of the vehicle, mounted in the lower forward side compartment, to provide deployment of the hose to the front of the vehicle.	
3.9	**Electrical System - Clarification** Electrical System shall be 12-volt	

ADDENDUM		Remarks / Exceptions
3.9.3	**Battery Charger or Conditioned – Clarification** The 115 volt, 20 amp connection shall be an auto-ejecting type (Kussmaul Super Auto-Eject or equal) located at the left side of the cab. The matching female receptacle shall also be provided.	
3.9.5.6	**Scene Lights - Clarification** The lights shall be 115 Volt and operate from the vehicle generator	
3.9.6.2	**Horn - Change** Air horn activating switch will be located in front of the driver ONLY.	
3.9.7	**Emergency Warning Lights – Clarification**	
	a. Two Whelen Ultra Edge (or equal) 24 in. lightbars, each with a total of eight LED assemblies shall be mounted on the vehicle's top surface, one on each side to meet visibility requirements. Each lightbar shall include a red LED assembly at each corner with one red LED assembly facing to the inside and outside of the vehicle. A clear LED assembly shall face toward the front and rear of the vehicle.	
	b. One Whelen Ultra Edge (or equal) 24 in. lightbar with a total of seven LED assemblies each shall be mounted on the top rear of the engine cover. The lightbar shall include a red LED assembly at each comer, one red LED assembly on each side facing outward, and one red LED assembly facing to the rear.	
	c. Two red rectangular LED warning lights shall be provided at the front of the unit.	
	d. Three red LED rectangular warning lights shall be provided on each side.	
	e. Two red LED rectangular warning lights shall be provided on the rear of the unit.	
ADD 3.9.7.1.1	Two Whelen Super LED 360 (or equal) amber lights shall be installed on the top of the vehicle's centerbody section, one on each side. The lights shall be controlled by a single switch on the driver's console. **Justification -** These lights will be used on the airfield during non-emergency responses.	

ADDENDUM		Remarks / Exceptions
3.9.8	**Radio Circuit - Change**	
	a. Two 40-amp cables with circuit breakers, wired direct from the vehicle batteries through the Master Disconnect switch shall be provided to an area in the vehicle cab to power a Motorola XTL2500 UHF radio and an I-Com Model A110 VHF radio. Radio and components will be supplied and installed by the purchaser.	
	b. Two compatible antenna mounts shall be located on the cab roof. Coax cable shall be run from the antenna mount to the same location as the 40 amp power cables. Exact location shall be determined at the engineering meeting.	
3.9.8	**Radio Circuit – Additional** A fire Com headset/intercom system, with wireless headsets for three crew members with interface for the I-Com and Motorola radios shall be installed. The driver and turret operators headsets, shall have transmit, receive and intercom capability. The third crew member shall have receive and intercom only, no transmit capability. A full pump panel station with transmit, receive and intercom capability shall be provided at the structural panel. Additionally, a full station with transmit, receive and intercom capability shall be provided at the left rear of the vehicle. **Justification** - The Headset system provides hearing protection for the crews while travelling to an incident scene and also allows for clear communications while operating on the emergency incident.	
3.9.10	**Auxiliary Generator - Clarification** The auxiliary generator shall be a 10 KW hydraulic	

ADDENDUM		Remarks / Exceptions
ADD 6.3.1	**Supplementary, Agent**	
	a. A total of two tanks of foam shall be supplied with the vehicle. The foam shall be 3% AFFF and conforming to Mil-F-24385 shipped in fifty five-gallon containers. The manufacturer of the foam supplied must be registered on the QPL listing.	
	b. A total of 900 pounds of PKW (Vivid Purple K) dry chemical with funnel for easy recharging shall be supplied with vehicle.	
	c. One fully charged nitrogen bottle shall be supplied. The quantity of nitrogen provided shall be such that it will provide a complete discharge of the dry chemical agent powder plus perform a blowdown operation. One spare bottle with carrier for re-servicing shall also be provided.	
	Justification - One additional tank of Purple K and AFFF are required to replenish supplies as a result of FAA required testing. Foam tests are required quarterly and dry chemical test required bi-annually. The spare nitrogen cylinder is to allow firefighters to place the system back in service immediately after use.	
ADD Section 8	**Pre-Construction Conference, Factory Visit and Delivery**	
	a. Preconstruction Conference In order to insure compliance with the contract specifications, the Successful bidder will be required to provide a representative to travel to Hagerstown Regional Airport for a pre-construction conference within thirty(30) calendar days after receipt of order.	
	b. Factory Inspection Visit A factory inspection of the completed vehicle shall be provided at no cost to the Airport. Bid Price shall include airfare, meals and three (3) days and two (2) nights lodging for two (2) Airport representatives.	
	Justification - A preconstruction conference is critical to assuring we will receive the product we have ordered from the factory. All the minute details can be worked out. The factory inspection allows HGR to inspect the apparatus and have all necessary discrepancies attended to at the factory rather than having the vehicle delivered then conducting an inspection.	
	c. Delivery - Vehicle shall be delivered to Hagerstown Regional Airport via flatbed trailer. Delivery hours are 7:00 A.M. - 4:00 P.M., Monday through Friday. Bidder shall call 240-313-2777 twenty (24) hours prior to delivery.	